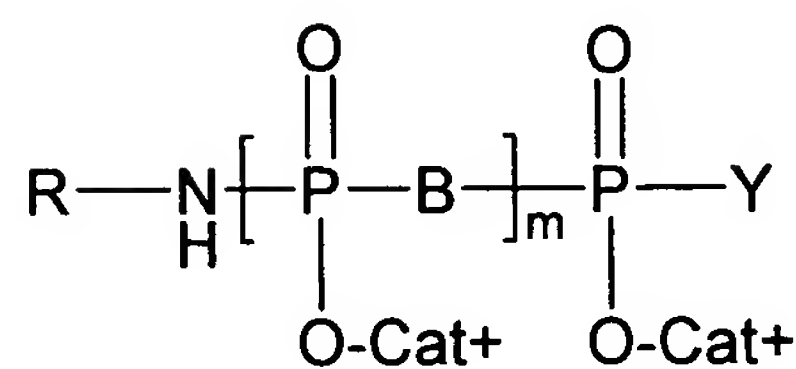


In the Claims

1-22 (canceled).

23 (new). A composition of matter comprising:

a)



Formula (I)

wherein Cat<sup>+</sup> represents one or several identical or different organic or mineral cation(s) including proton;

m is an integer from 1 to 3;

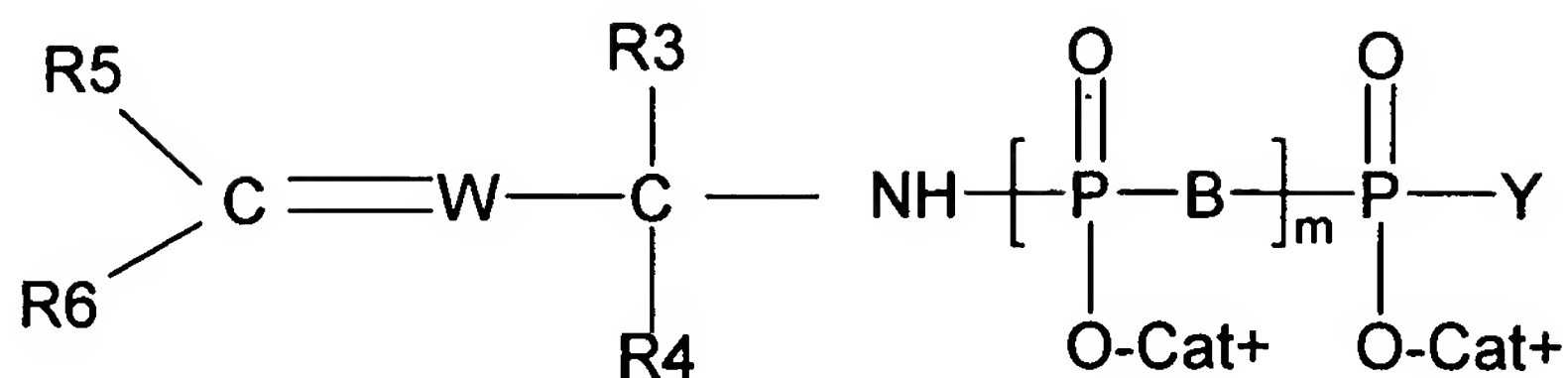
B is O, NH, or any group capable to be hydrolyzed;

Y = O<sup>-</sup>Cat<sup>+</sup>, a C<sub>1</sub>-C<sub>3</sub> alkyl group, a group -A-R, or a radical selected from the group consisting of a nucleoside, an oligonucleotide, a nucleic acid, an amino acid, a peptide, a protein, a monosaccharide, an oligosaccharide, a polysaccharide, a fatty acid, a simple lipid, a complex lipid, a folic acid, a tetrahydrofolic acid, a phosphoric acid, an inositol, a vitamin, a co-enzyme, a flavonoid, an aldehyde, an epoxyde and a halohydrin;

A is O, NH, CHF, CF<sub>2</sub> or CH<sub>2</sub>; and,

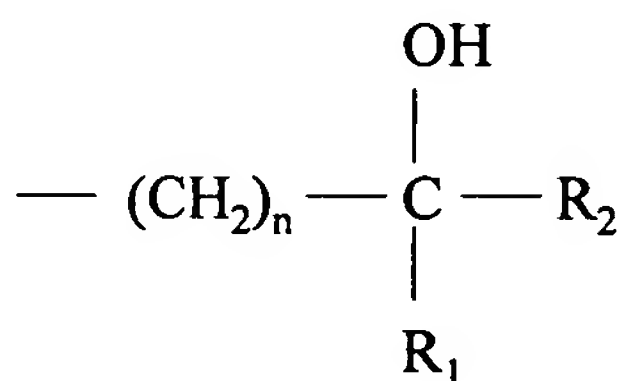
R is a linear, branched, or cyclic, aromatic or not, saturated or unsaturated, C<sub>1</sub>-C<sub>50</sub> hydrocarbon group, optionally interrupted by at least one heteroatom, wherein said hydrocarbon group comprises an alkyl, an alkylenyl, or an alkynyl, preferably an alkyl or an alkylene, which can be substituted by one or several substituents selected from the group consisting of : an alkyl, an alkylenyl, an alkynyl, an epoxyalkyl, an aryl, an heterocycle, an alkoxy, an acyl, an alcohol, a carboxylic group (-COOH), an ester, an amine, an amino group (-NH<sub>2</sub>), an amide (-CONH<sub>2</sub>), an imine, a nitrile, an hydroxyl (-OH), a aldehyde group (-CHO), an halogen, an halogenoalkyl, a thiol (-SH), a thioalkyl, a sulfone, a sulfoxide, and a combination thereof;

b)

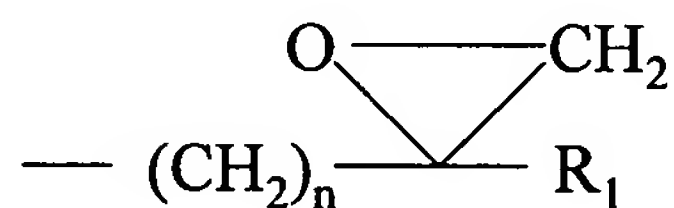


Formula (X)

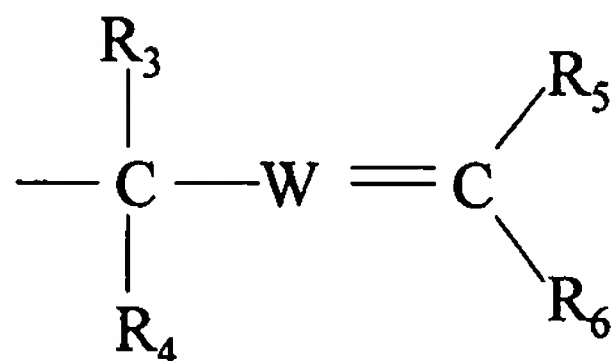
in which R<sub>3</sub>, R<sub>4</sub>, and R<sub>5</sub>, identical or different, are a hydrogen or (C<sub>1</sub>-C<sub>3</sub>)alkyl group, W is -CH- or -N-, R<sub>6</sub> is an (C<sub>2</sub>-C<sub>3</sub>)acyl, an aldehyde, an (C<sub>1</sub>-C<sub>3</sub>)alcohol, or an (C<sub>2</sub>-C<sub>3</sub>)ester, Cat<sup>+</sup> represents one or several identical or different organic or mineral cation(s) including the proton, B is O or NH, m is an integer from 1 to 3, and Y is O<sup>-</sup>Cat<sup>+</sup>, a nucleoside, or a radical -A-R, wherein A is O, NH, CHF, CF<sub>2</sub> or CH<sub>2</sub>, and R is selected from the group consisting of:



wherein n is an integer from 2 to 20, R<sub>1</sub> is a (C<sub>1</sub>-C<sub>3</sub>)alkyl group, and R<sub>2</sub> is an halogenated (C<sub>1</sub>-C<sub>3</sub>)alkyl, a (C<sub>1</sub>-C<sub>3</sub>)alkoxy-(C<sub>1</sub>-C<sub>3</sub>)alkyl, an halogenated (C<sub>2</sub>-C<sub>3</sub>)acyl or a (C<sub>1</sub>-C<sub>3</sub>)alkoxy-(C<sub>2</sub>-C<sub>3</sub>)acyl;

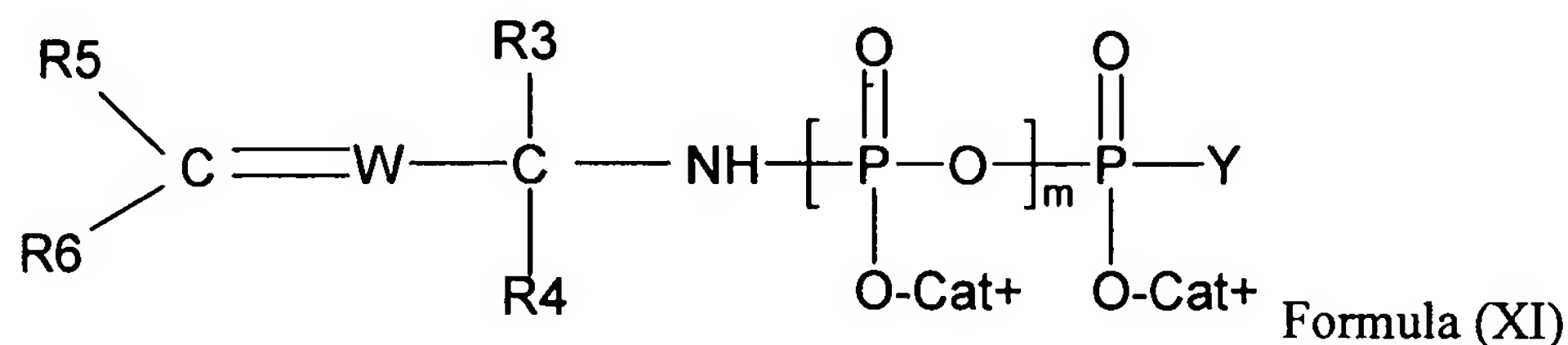


wherein n is an integer from 2 to 20, and R<sub>1</sub> is a methyl or ethyl group; and

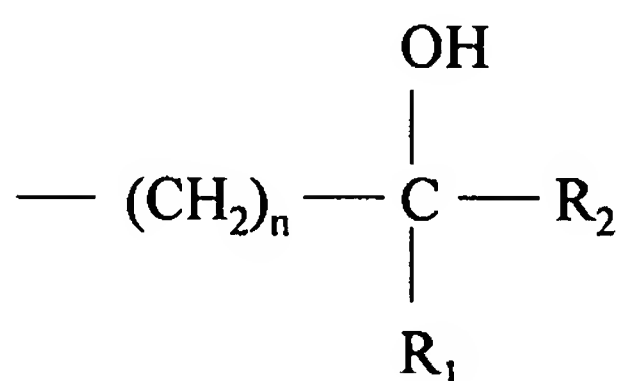


wherein  $R_3$ ,  $R_4$ , and  $R_5$ , identical or different, are a hydrogen or (C<sub>1</sub>-C<sub>3</sub>)alkyl group, W is -CH- or -N-, and  $R_6$  is an (C<sub>2</sub>-C<sub>3</sub>)acyl, an aldehyde, an (C<sub>1</sub>-C<sub>3</sub>)alcohol, or an (C<sub>2</sub>-C<sub>3</sub>)ester;

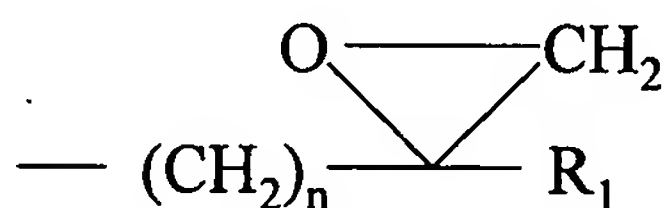
c)



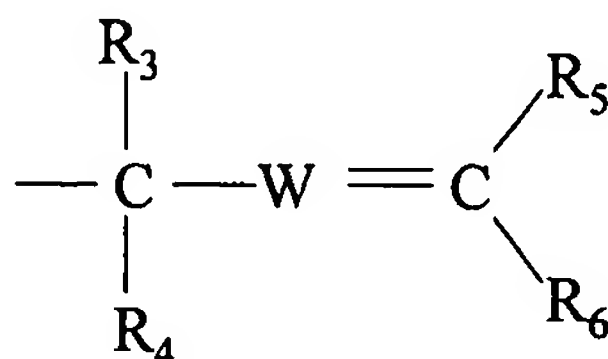
in which  $R_3$ ,  $R_4$ , and  $R_5$ , identical or different, are a hydrogen or (C<sub>1</sub>-C<sub>3</sub>)alkyl group, W is -CH- or -N-,  $R_6$  is an (C<sub>2</sub>-C<sub>3</sub>)acyl, an aldehyde, an (C<sub>1</sub>-C<sub>3</sub>)alcohol, or an (C<sub>2</sub>-C<sub>3</sub>)ester, Cat<sup>+</sup> represents one or several identical or different organic or mineral cation(s) including the proton, m is an integer from 1 to 3, and Y is O<sup>-</sup>Cat<sup>+</sup>, a nucleoside, or a radical -A-R, wherein A is O, NH, CHF, CF<sub>2</sub> or CH<sub>2</sub>, and R is selected from the group consisting of:



wherein n is an integer from 2 to 20,  $R_1$  is a (C<sub>1</sub>-C<sub>3</sub>)alkyl group, and  $R_2$  is an halogenated (C<sub>1</sub>-C<sub>3</sub>)alkyl, a (C<sub>1</sub>-C<sub>3</sub>)alkoxy-(C<sub>1</sub>-C<sub>3</sub>)alkyl, an halogenated (C<sub>2</sub>-C<sub>3</sub>)acyl or a (C<sub>1</sub>-C<sub>3</sub>)alkoxy-(C<sub>2</sub>-C<sub>3</sub>)acyl;

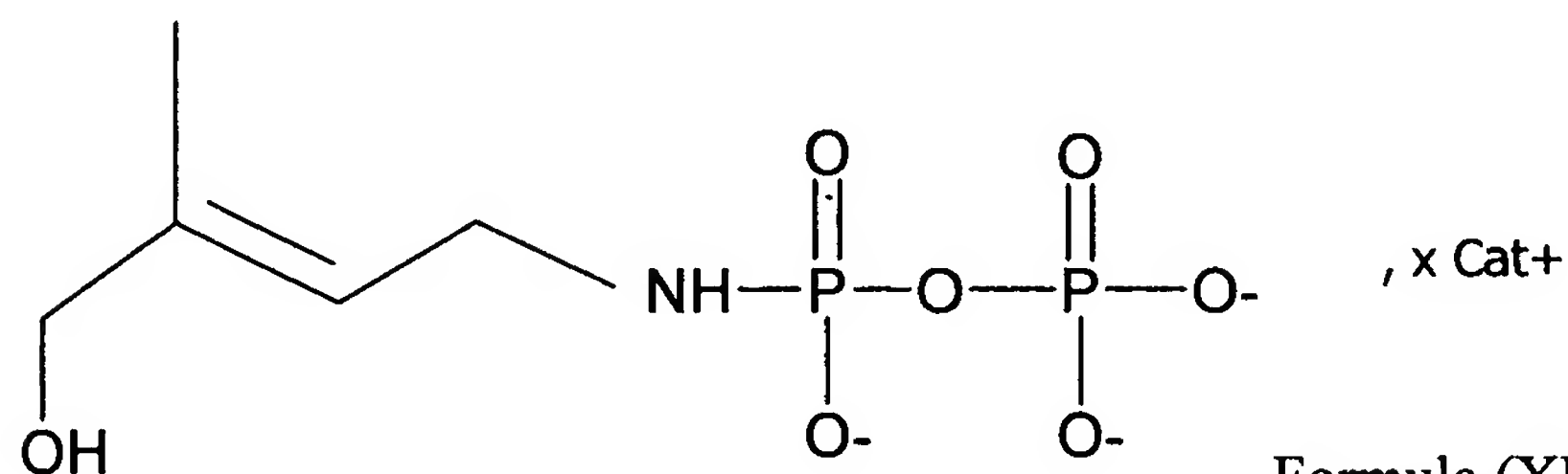


wherein n is an integer from 2 to 20, and  $R_1$  is a methyl or ethyl group; and



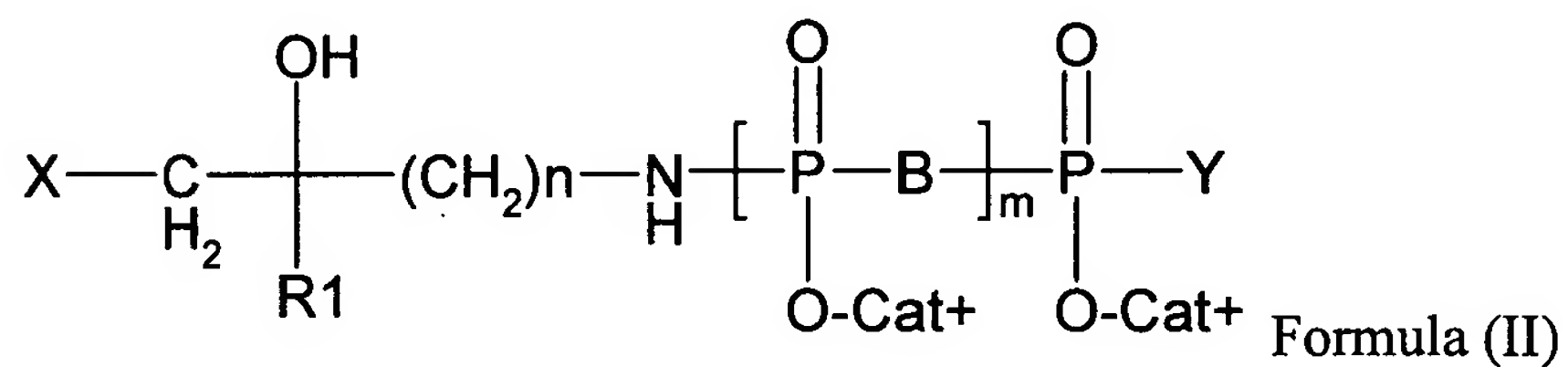
wherein  $R_3$ ,  $R_4$ , and  $R_5$ , identical or different, are a hydrogen or  $(C_1-C_3)$ alkyl group,  $W$  is  $-CH-$  or  $-N-$ , and  $R_6$  is an  $(C_2-C_3)$ acyl, an aldehyde, an  $(C_1-C_3)$ alcohol, or an  $(C_2-C_3)$ ester;

d)



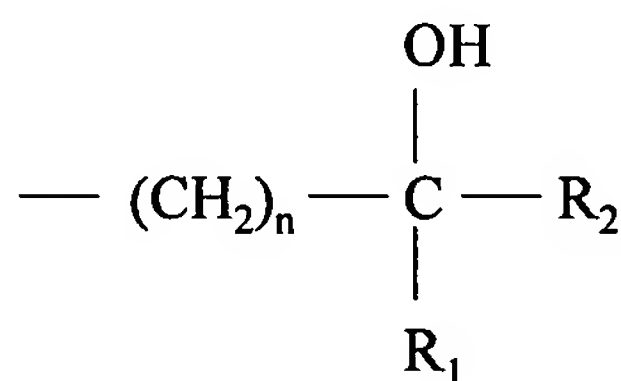
Formula (XII) N-HDMAPP;

e)

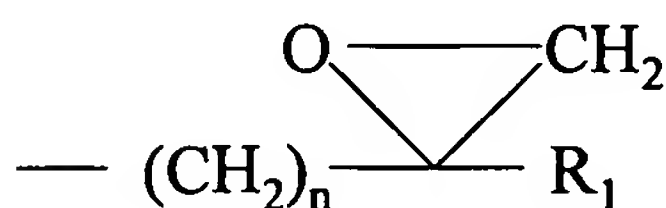


Formula (II)

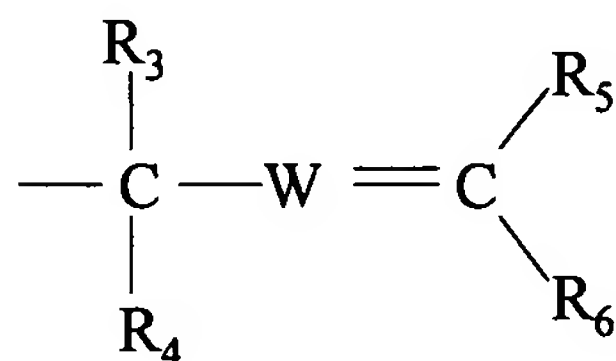
in which  $X$  is an halogen,  $B$  is  $O$  or  $NH$ ,  $m$  is an integer from 1 to 3,  $R_1$  is a methyl or ethyl group,  $\text{Cat}^+$  represents one or several identical or different organic or mineral cation(s) including the proton, and  $n$  is an integer from 2 to 20, and  $Y$  is  $\text{O}^-\text{Cat}^+$ , a nucleoside, or a radical  $-A-R$ , wherein  $A$  is  $O$ ,  $NH$ ,  $\text{CHF}$ ,  $\text{CF}_2$  or  $\text{CH}_2$  and  $R$  is selected from the group consisting of:



wherein n is an integer from 2 to 20, R<sub>1</sub> is a (C<sub>1</sub>-C<sub>3</sub>)alkyl group, and R<sub>2</sub> is an halogenated (C<sub>1</sub>-C<sub>3</sub>)alkyl, a (C<sub>1</sub>-C<sub>3</sub>)alkoxy-(C<sub>1</sub>-C<sub>3</sub>)alkyl, an halogenated (C<sub>2</sub>-C<sub>3</sub>)acyl or a (C<sub>1</sub>-C<sub>3</sub>)alkoxy-(C<sub>2</sub>-C<sub>3</sub>)acyl;

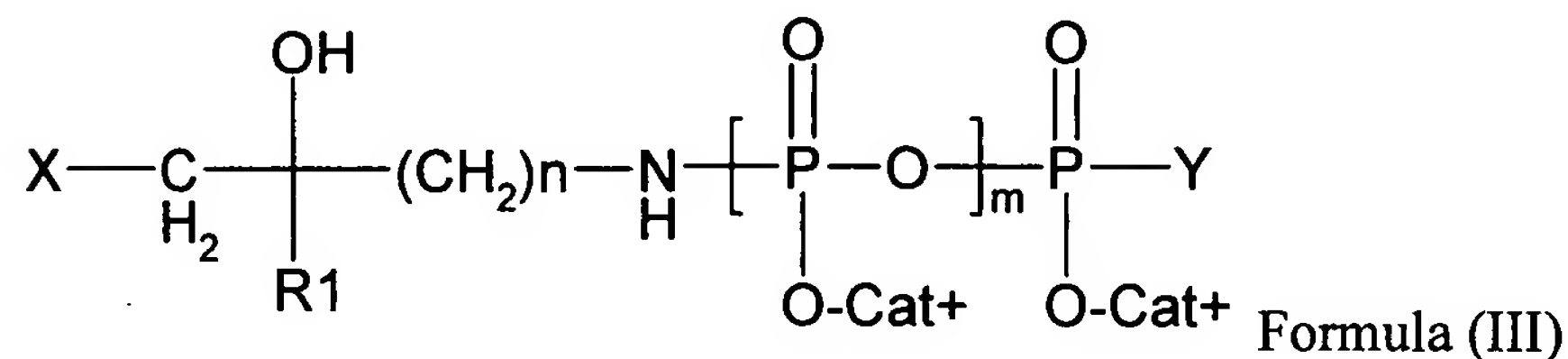


wherein n is an integer from 2 to 20, and R<sub>1</sub> is a methyl or ethyl group; and

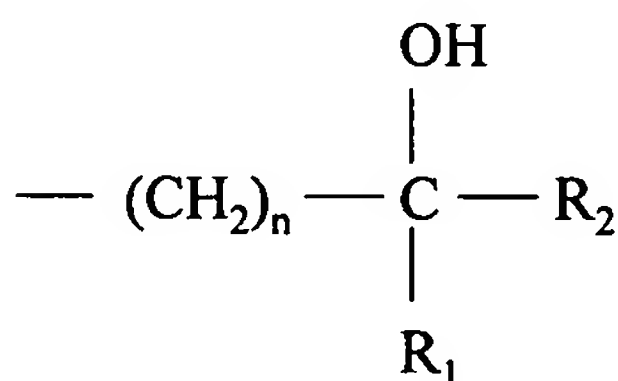


wherein R<sub>3</sub>, R<sub>4</sub>, and R<sub>5</sub>, identical or different, are a hydrogen or (C<sub>1</sub>-C<sub>3</sub>)alkyl group, W is -CH- or -N-, and R<sub>6</sub> is an (C<sub>2</sub>-C<sub>3</sub>)acyl, an aldehyde, an (C<sub>1</sub>-C<sub>3</sub>)alcohol, or an (C<sub>2</sub>-C<sub>3</sub>)ester;

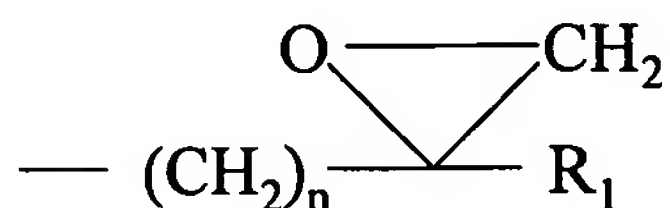
f)



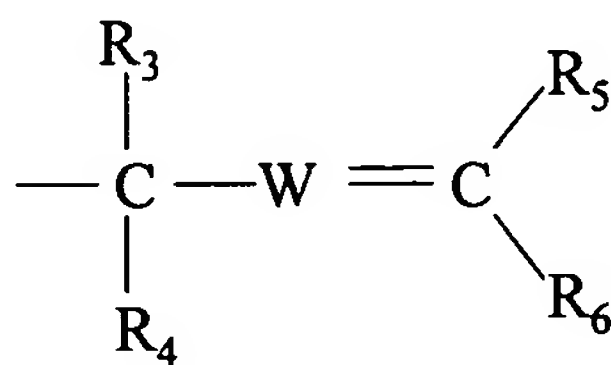
in which X is an halogen, B is O or NH, m is an integer from 1 to 3, R<sub>1</sub> is a methyl or ethyl group, Cat<sup>+</sup> represents one or several identical or different organic or mineral cation(s) including the proton, and n is an integer from 2 to 20, and Y is O<sup>-</sup>Cat<sup>+</sup>, a nucleoside, or a radical -A-R, wherein A is O, NH, CHF, CF<sub>2</sub> or CH<sub>2</sub> and R is selected from the group consisting of:



wherein n is an integer from 2 to 20, R<sub>1</sub> is a (C<sub>1</sub>-C<sub>3</sub>)alkyl group, and R<sub>2</sub> is an halogenated (C<sub>1</sub>-C<sub>3</sub>)alkyl, a (C<sub>1</sub>-C<sub>3</sub>)alkoxy-(C<sub>1</sub>-C<sub>3</sub>)alkyl, an halogenated (C<sub>2</sub>-C<sub>3</sub>)acyl or a (C<sub>1</sub>-C<sub>3</sub>)alkoxy-(C<sub>2</sub>-C<sub>3</sub>)acyl;

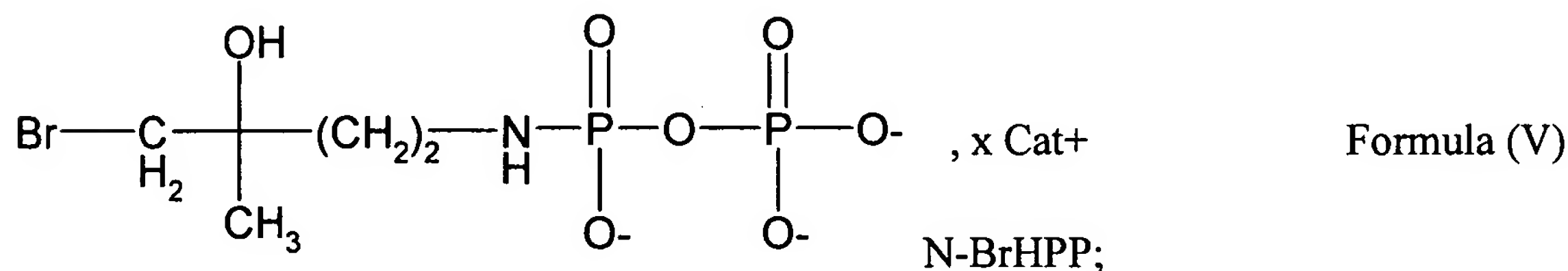


wherein n is an integer from 2 to 20, and R<sub>1</sub> is a methyl or ethyl group; and

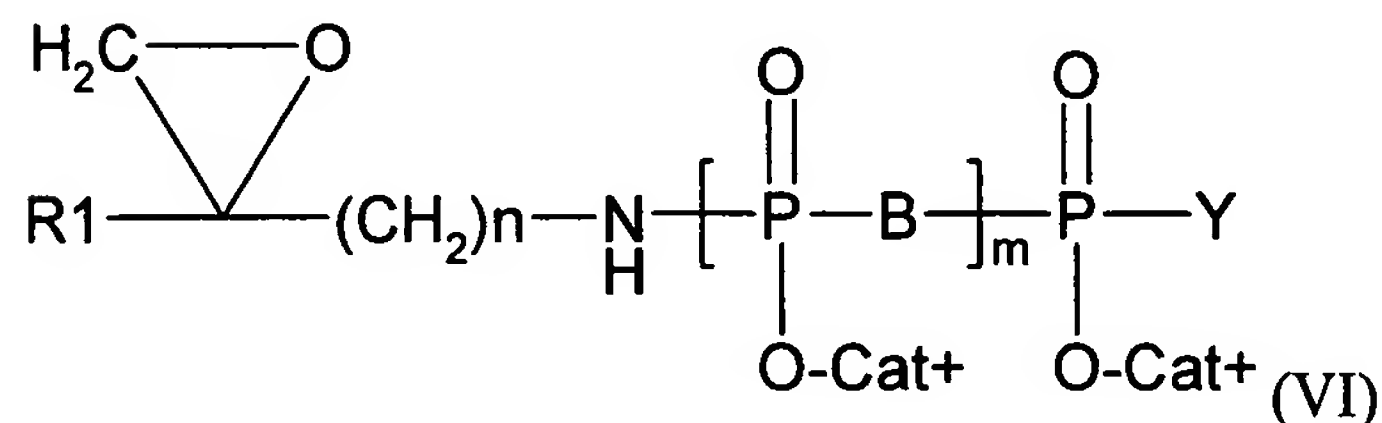


wherein R<sub>3</sub>, R<sub>4</sub>, and R<sub>5</sub>, identical or different, are a hydrogen or (C<sub>1</sub>-C<sub>3</sub>)alkyl group, W is -CH- or -N-, and R<sub>6</sub> is an (C<sub>2</sub>-C<sub>3</sub>)acyl, an aldehyde, an (C<sub>1</sub>-C<sub>3</sub>)alcohol, or an (C<sub>2</sub>-C<sub>3</sub>)ester;

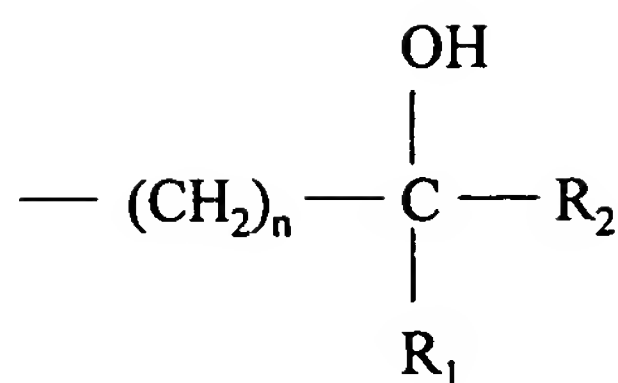
g)



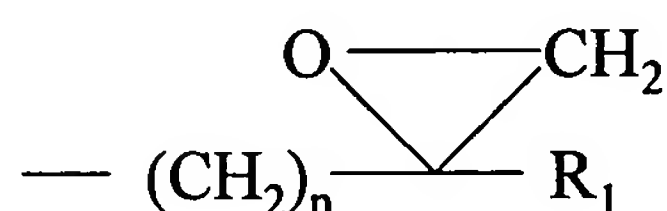
h)



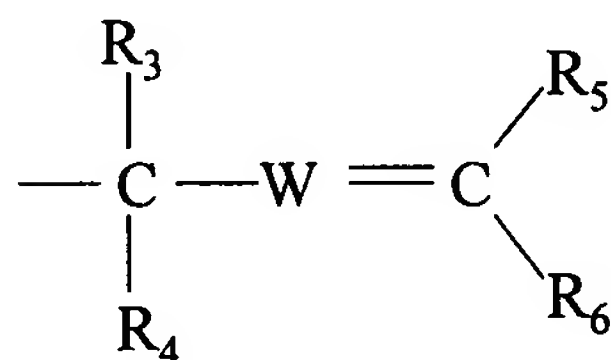
in which R<sub>1</sub> is a methyl or ethyl group, Cat<sup>+</sup> represents one or several identical or different organic or mineral cation(s), including the proton, B is O or NH, m is an integer from 1 to 3, and n is an integer from 2 to 20, and Y is O<sup>-</sup>Cat<sup>+</sup>, a nucleoside, or a radical -A-R, wherein A is O, NH, CHF, CF<sub>2</sub> or CH<sub>2</sub>, and R is selected from the group consisting of:



wherein n is an integer from 2 to 20, R<sub>1</sub> is a (C<sub>1</sub>-C<sub>3</sub>)alkyl group, and R<sub>2</sub> is an halogenated (C<sub>1</sub>-C<sub>3</sub>)alkyl, a (C<sub>1</sub>-C<sub>3</sub>)alkoxy-(C<sub>1</sub>-C<sub>3</sub>)alkyl, an halogenated (C<sub>2</sub>-C<sub>3</sub>)acyl or a (C<sub>1</sub>-C<sub>3</sub>)alkoxy-(C<sub>2</sub>-C<sub>3</sub>)acyl;



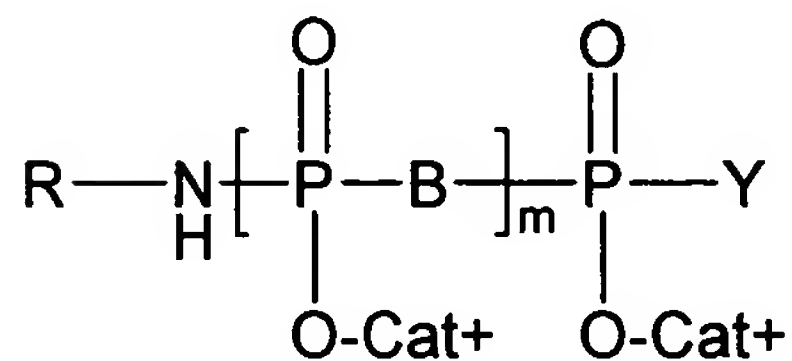
wherein n is an integer from 2 to 20, and R<sub>1</sub> is a methyl or ethyl group; and



wherein R<sub>3</sub>, R<sub>4</sub>, and R<sub>5</sub>, identical or different, are a hydrogen or (C<sub>1</sub>-C<sub>3</sub>)alkyl group, W is -CH- or -N-, and R<sub>6</sub> is an (C<sub>2</sub>-C<sub>3</sub>)acyl, an aldehyde, an (C<sub>1</sub>-C<sub>3</sub>)alcohol, or an (C<sub>2</sub>-C<sub>3</sub>)ester; or

i) a composition comprising a carrier and:

i)



Formula (I)

wherein Cat<sup>+</sup> represents one or several identical or different organic or mineral cation(s) including proton;

m is an integer from 1 to 3;

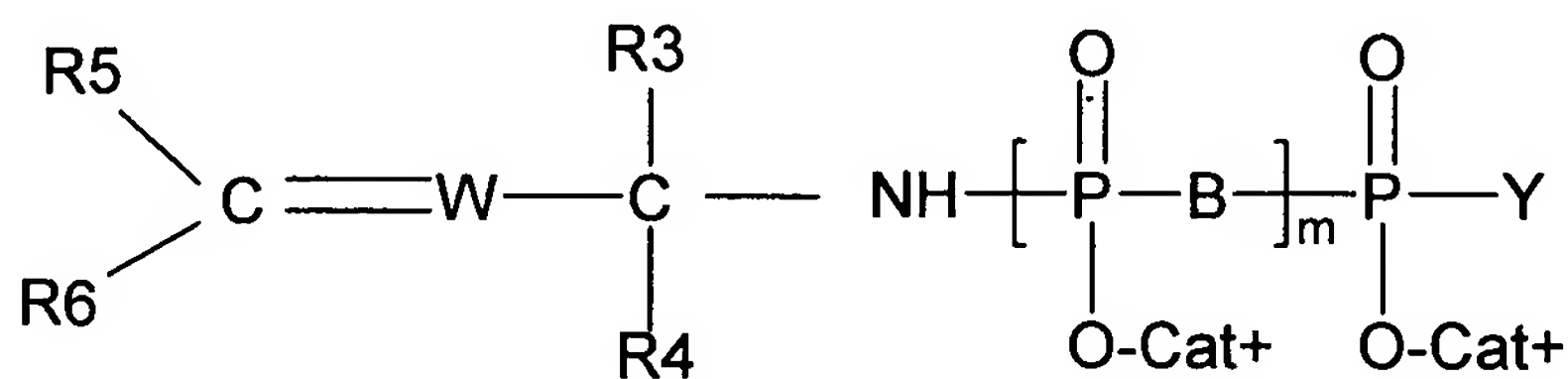
B is O, NH, or any group capable to be hydrolyzed;

Y = O<sup>-</sup>Cat<sup>+</sup>, a C<sub>1</sub>-C<sub>3</sub> alkyl group, a group -A-R, or a radical selected from the group consisting of a nucleoside, an oligonucleotide, a nucleic acid, an amino acid, a peptide, a protein, a monosaccharide, an oligosaccharide, a polysaccharide, a fatty acid, a simple lipid, a complex lipid, a folic acid, a tetrahydrofolic acid, a phosphoric acid, an inositol, a vitamin, a co-enzyme, a flavonoid, an aldehyde, an epoxyde and a halohydrin;

A is O, NH, CHF, CF<sub>2</sub> or CH<sub>2</sub>; and,

R is a linear, branched, or cyclic, aromatic or not, saturated or unsaturated, C<sub>1</sub>-C<sub>50</sub> hydrocarbon group, optionally interrupted by at least one heteroatom, wherein said hydrocarbon group comprises an alkyl, an alkylenyl, or an alkynyl, preferably an alkyl or an alkylene, which can be substituted by one or several substituents selected from the group consisting of : an alkyl, an alkylenyl, an alkynyl, an epoxyalkyl, an aryl, an heterocycle, an alkoxy, an acyl, an alcohol, a carboxylic group (-COOH), an ester, an amine, an amino group (-NH<sub>2</sub>), an amide (-CONH<sub>2</sub>), an imine, a nitrile, an hydroxyl (-OH), a aldehyde group (-CHO), an halogen, an halogenoalkyl, a thiol (-SH), a thioalkyl, a sulfone, a sulfoxide, and a combination thereof;

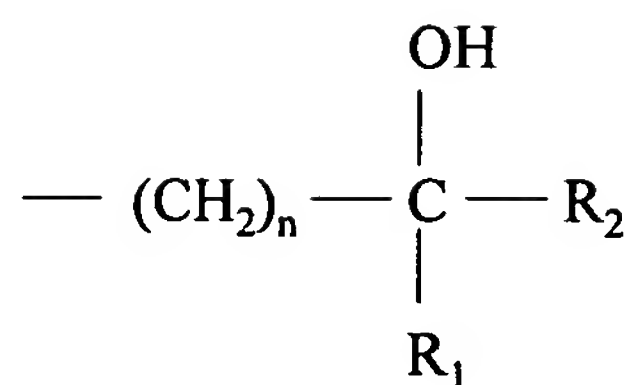
ii)



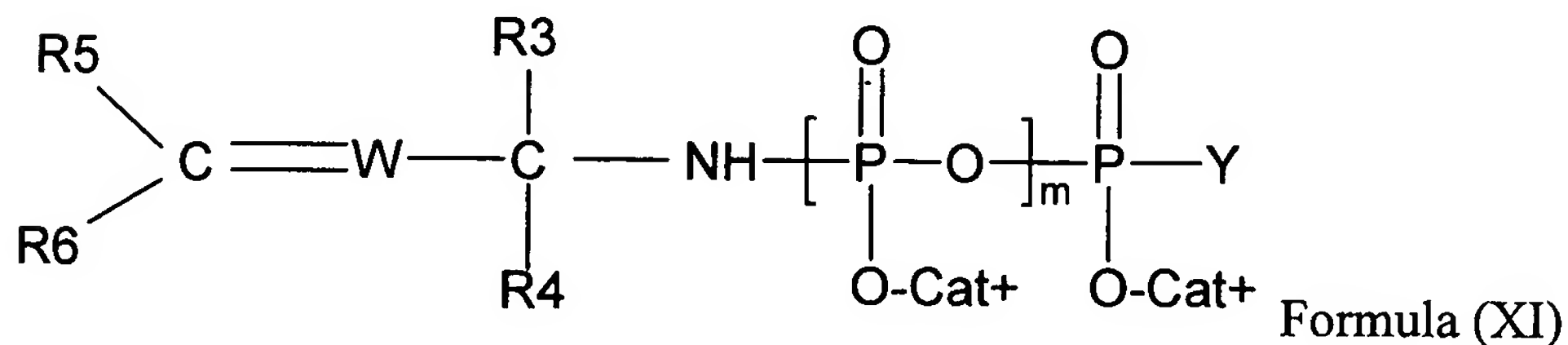
Formula (X)

in which R<sub>3</sub>, R<sub>4</sub>, and R<sub>5</sub>, identical or different, are a hydrogen or (C<sub>1</sub>-C<sub>3</sub>)alkyl group, W is -CH- or -N-, R<sub>6</sub> is an (C<sub>2</sub>-C<sub>3</sub>)acyl, an aldehyde, an (C<sub>1</sub>-C<sub>3</sub>)alcohol, or an (C<sub>2</sub>-C<sub>3</sub>)ester, Cat<sup>+</sup> represents one or several identical or different organic or mineral cation(s) including the proton, B is O or NH, m is an integer from 1 to 3, and Y is O<sup>-</sup>Cat<sup>+</sup>, a nucleoside, or a radical -A-R, wherein A is O, NH, CHF, CF<sub>2</sub> or CH<sub>2</sub>, and R is selected from the group consisting of:



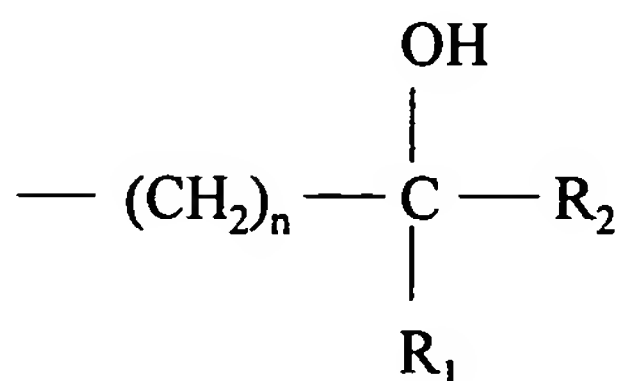

$$\text{---} (\text{CH}_2)_n \text{---} \begin{array}{c} \text{O} \text{---} \text{CH}_2 \\ \diagdown \quad \diagup \\ \text{---} \text{R}_1 \end{array}$$
$$\begin{array}{c} \text{R}_3 \\ | \\ -\text{C}-\text{W}=\text{C} \\ | \quad \quad \quad \diagup \quad \diagdown \\ \text{R}_4 \quad \quad \quad \text{R}_5 \quad \text{R}_6 \end{array}$$

iii)

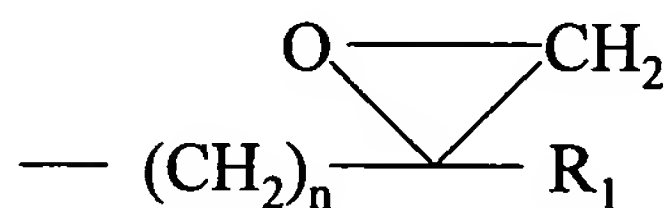


J:\INN\135\Amd-Resp\PreAmd.doc\DNB/sl

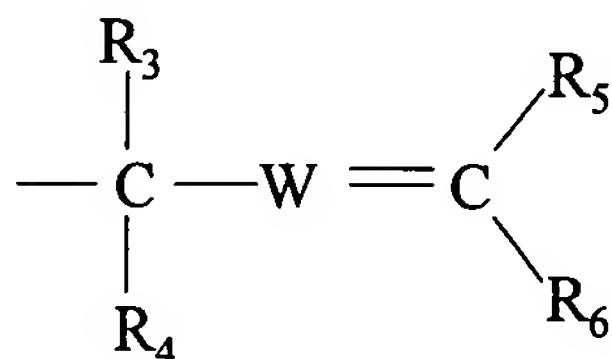
to 3, and Y is O<sup>-</sup>Cat<sup>+</sup>, a nucleoside, or a radical -A-R, wherein A is O, NH, CHF, CF<sub>2</sub> or CH<sub>2</sub>, and R is selected from the group consisting of:



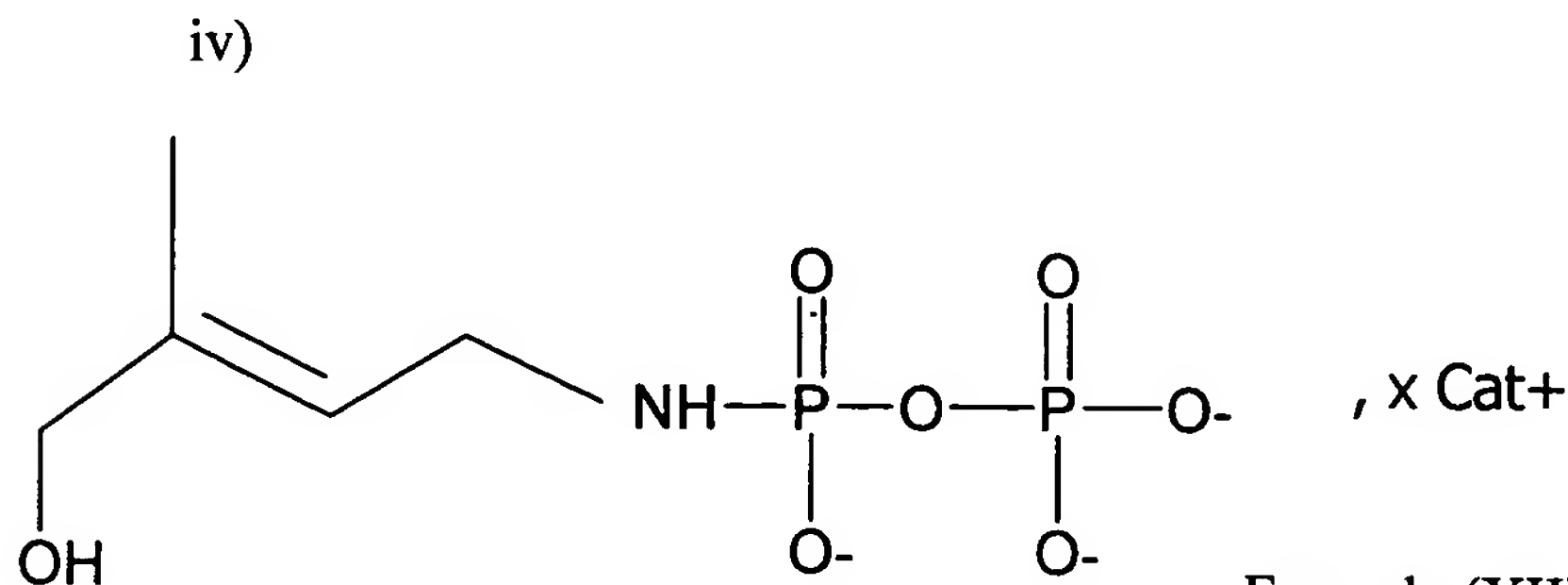
wherein n is an integer from 2 to 20, R<sub>1</sub> is a (C<sub>1</sub>-C<sub>3</sub>)alkyl group, and R<sub>2</sub> is an halogenated (C<sub>1</sub>-C<sub>3</sub>)alkyl, a (C<sub>1</sub>-C<sub>3</sub>)alkoxy-(C<sub>1</sub>-C<sub>3</sub>)alkyl, an halogenated (C<sub>2</sub>-C<sub>3</sub>)acyl or a (C<sub>1</sub>-C<sub>3</sub>)alkoxy-(C<sub>2</sub>-C<sub>3</sub>)acyl;



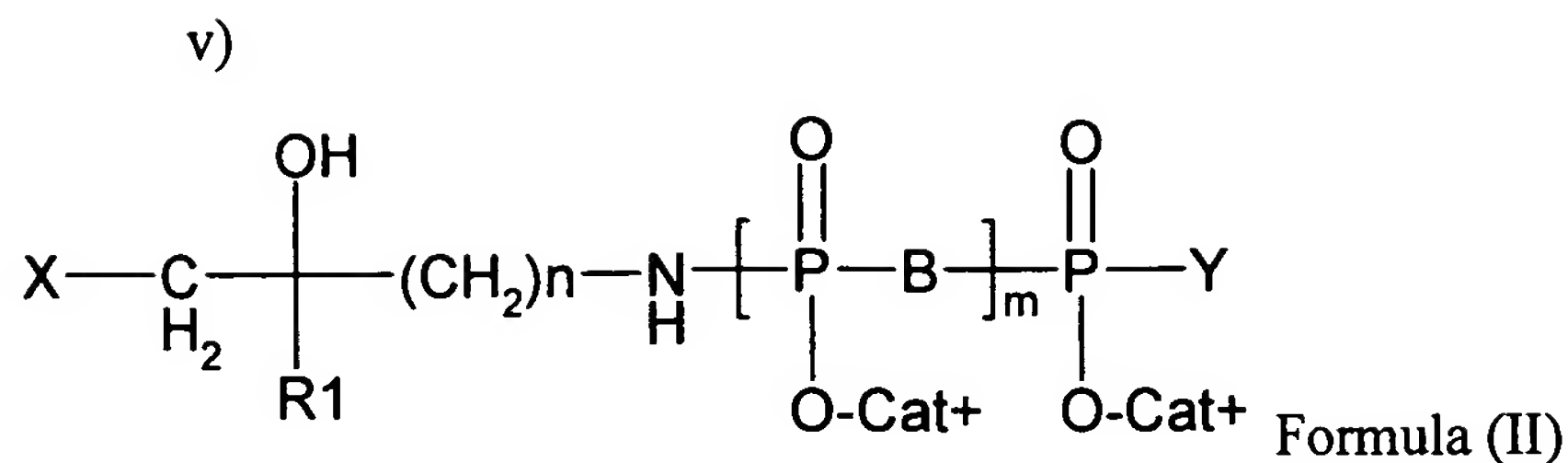
wherein n is an integer from 2 to 20, and R<sub>1</sub> is a methyl or ethyl group; and



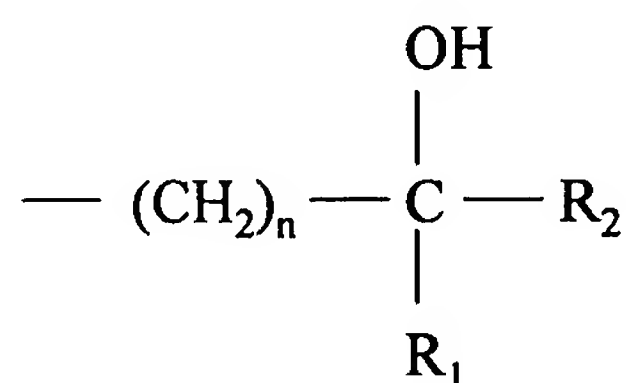
wherein R<sub>3</sub>, R<sub>4</sub>, and R<sub>5</sub>, identical or different, are a hydrogen or (C<sub>1</sub>-C<sub>3</sub>)alkyl group, W is -CH- or -N-, and R<sub>6</sub> is an (C<sub>2</sub>-C<sub>3</sub>)acyl, an aldehyde, an (C<sub>1</sub>-C<sub>3</sub>)alcohol, or an (C<sub>2</sub>-C<sub>3</sub>)ester;



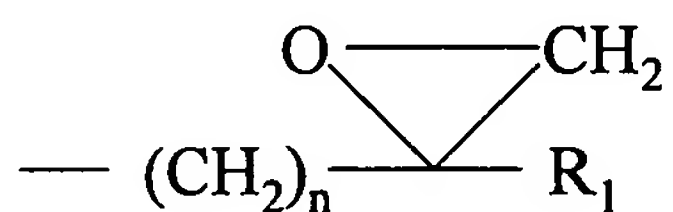
Formula (XII) N-HDMAPP;



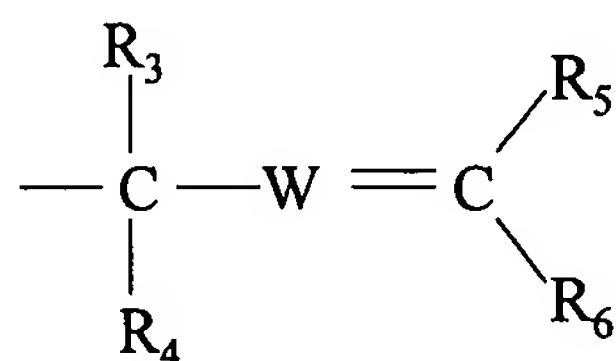
in which X is an halogen, B is O or NH, m is an integer from 1 to 3, R1 is a methyl or ethyl group, Cat<sup>+</sup> represents one or several identical or different organic or mineral cation(s) including the proton, and n is an integer from 2 to 20, and Y is O<sup>-</sup>Cat<sup>+</sup>, a nucleoside, or a radical -A-R, wherein A is O, NH, CHF, CF<sub>2</sub> or CH<sub>2</sub> and R is selected from the group consisting of:



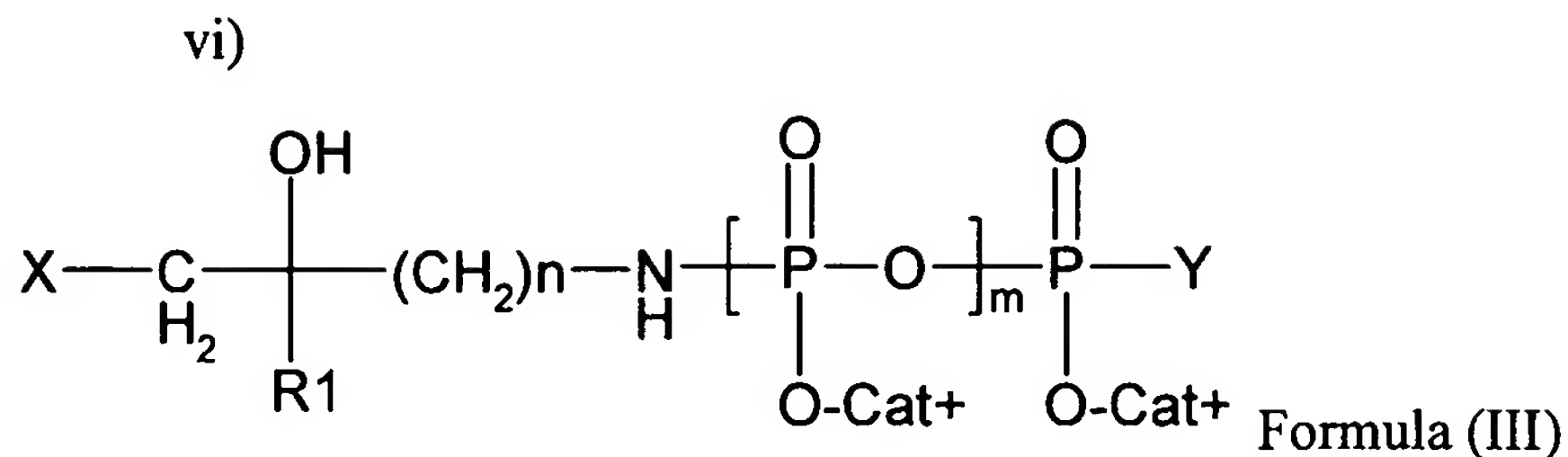
wherein n is an integer from 2 to 20, R<sub>1</sub> is a (C<sub>1</sub>-C<sub>3</sub>)alkyl group, and R<sub>2</sub> is an halogenated (C<sub>1</sub>-C<sub>3</sub>)alkyl, a (C<sub>1</sub>-C<sub>3</sub>)alkoxy-(C<sub>1</sub>-C<sub>3</sub>)alkyl, an halogenated (C<sub>2</sub>-C<sub>3</sub>)acyl or a (C<sub>1</sub>-C<sub>3</sub>)alkoxy-(C<sub>2</sub>-C<sub>3</sub>)acyl;



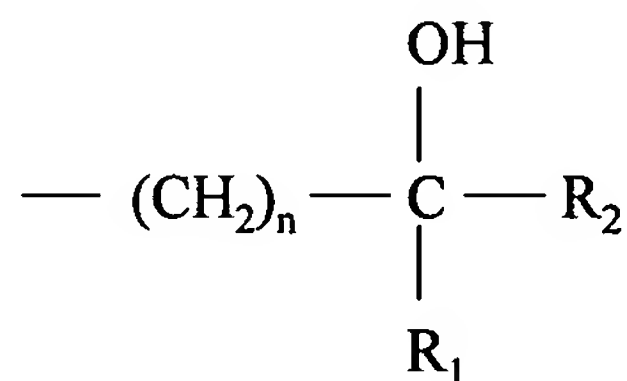
wherein n is an integer from 2 to 20, and R<sub>1</sub> is a methyl or ethyl group; and



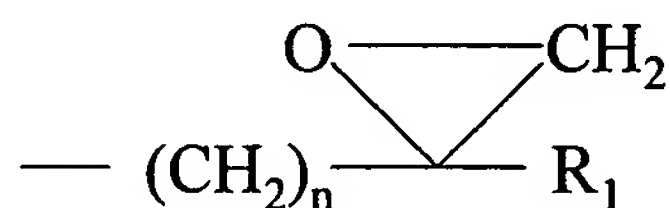
wherein R<sub>3</sub>, R<sub>4</sub>, and R<sub>5</sub>, identical or different, are a hydrogen or (C<sub>1</sub>-C<sub>3</sub>)alkyl group, W is -CH- or -N-, and R<sub>6</sub> is an (C<sub>2</sub>-C<sub>3</sub>)acyl, an aldehyde, an (C<sub>1</sub>-C<sub>3</sub>)alcohol, or an (C<sub>2</sub>-C<sub>3</sub>)ester;



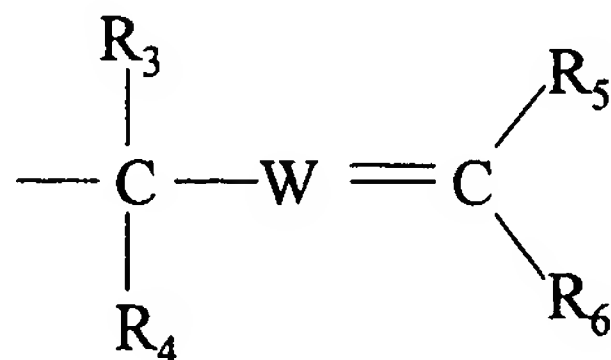
in which X is an halogen, B is O or NH, m is an integer from 1 to 3, R<sub>1</sub> is a methyl or ethyl group, Cat<sup>+</sup> represents one or several identical or different organic or mineral cation(s) including the proton, and n is an integer from 2 to 20, and Y is O<sup>-</sup>Cat<sup>+</sup>, a nucleoside, or a radical -A-R, wherein A is O, NH, CHF, CF<sub>2</sub> or CH<sub>2</sub> and R is selected from the group consisting of:



wherein n is an integer from 2 to 20, R<sub>1</sub> is a (C<sub>1</sub>-C<sub>3</sub>)alkyl group, and R<sub>2</sub> is an halogenated (C<sub>1</sub>-C<sub>3</sub>)alkyl, a (C<sub>1</sub>-C<sub>3</sub>)alkoxy-(C<sub>1</sub>-C<sub>3</sub>)alkyl, an halogenated (C<sub>2</sub>-C<sub>3</sub>)acyl or a (C<sub>1</sub>-C<sub>3</sub>)alkoxy-(C<sub>2</sub>-C<sub>3</sub>)acyl;

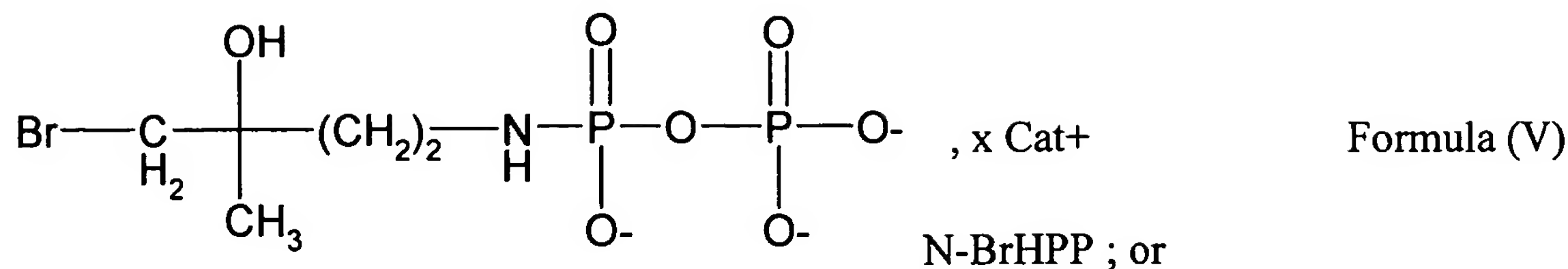


wherein n is an integer from 2 to 20, and R<sub>1</sub> is a methyl or ethyl group; and

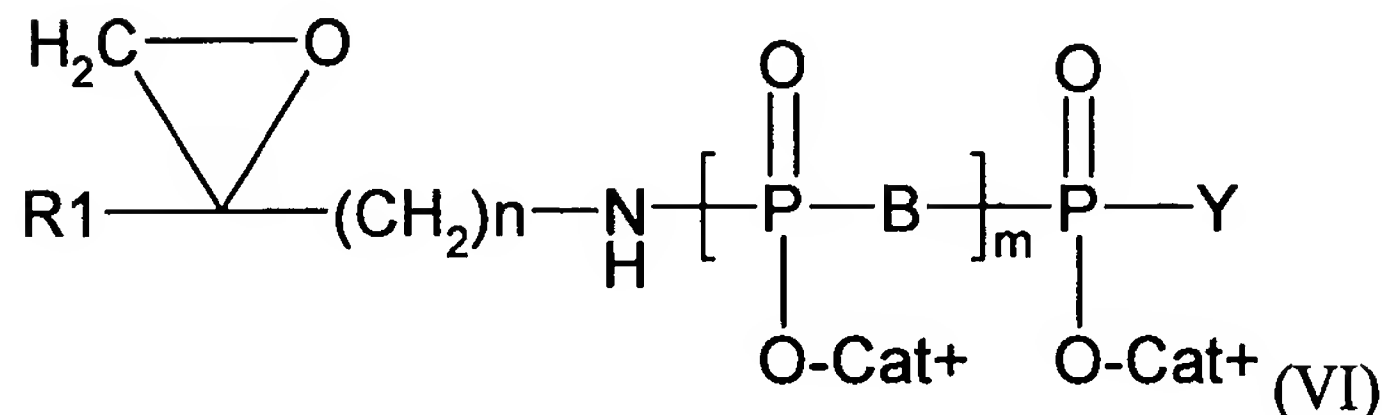


wherein R<sub>3</sub>, R<sub>4</sub>, and R<sub>5</sub>, identical or different, are a hydrogen or (C<sub>1</sub>-C<sub>3</sub>)alkyl group, W is -CH- or -N-, and R<sub>6</sub> is an (C<sub>2</sub>-C<sub>3</sub>)acyl, an aldehyde, an (C<sub>1</sub>-C<sub>3</sub>)alcohol, or an (C<sub>2</sub>-C<sub>3</sub>)ester;

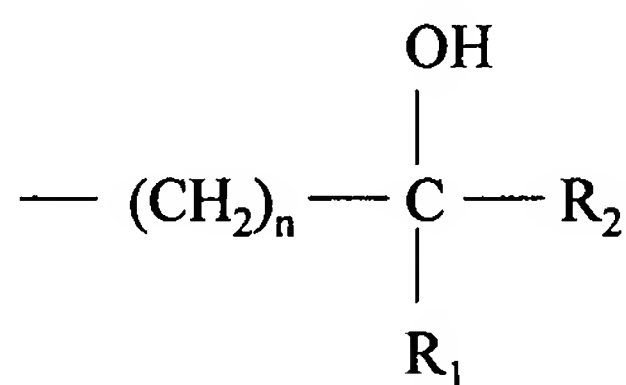
vii)



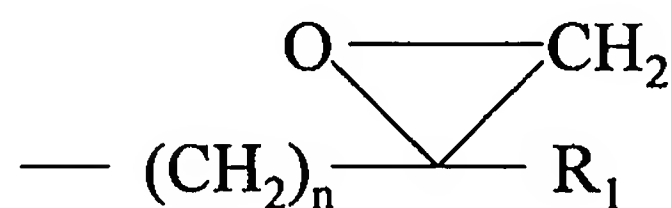
viii)



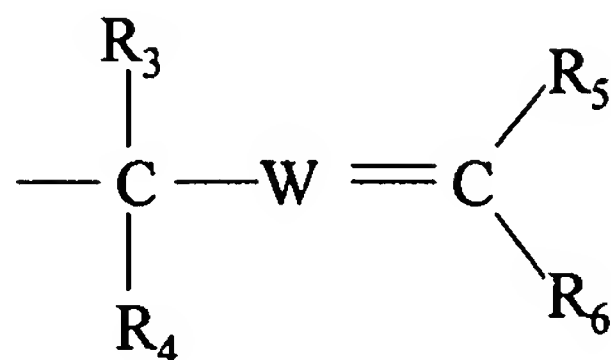
in which R1 is a methyl or ethyl group, Cat<sup>+</sup> represents one or several identical or different organic or mineral cation(s), including the proton, B is O or NH, m is an integer from 1 to 3, and n is an integer from 2 to 20, and Y is O<sup>-</sup>Cat<sup>+</sup>, a nucleoside, or a radical -A-R, wherein A is O, NH, CHF, CF<sub>2</sub> or CH<sub>2</sub>, and R is selected from the group consisting of:



wherein n is an integer from 2 to 20, R<sub>1</sub> is a (C<sub>1</sub>-C<sub>3</sub>)alkyl group, and R<sub>2</sub> is an halogenated (C<sub>1</sub>-C<sub>3</sub>)alkyl, a (C<sub>1</sub>-C<sub>3</sub>)alkoxy-(C<sub>1</sub>-C<sub>3</sub>)alkyl, an halogenated (C<sub>2</sub>-C<sub>3</sub>)acyl or a (C<sub>1</sub>-C<sub>3</sub>)alkoxy-(C<sub>2</sub>-C<sub>3</sub>)acyl;



wherein n is an integer from 2 to 20, and R<sub>1</sub> is a methyl or ethyl group; and



wherein R<sub>3</sub>, R<sub>4</sub>, and R<sub>5</sub>, identical or different, are a hydrogen or (C<sub>1</sub>-C<sub>3</sub>)alkyl group, W is -CH- or -N-, and R<sub>6</sub> is an (C<sub>2</sub>-C<sub>3</sub>)acyl, an aldehyde, an (C<sub>1</sub>-C<sub>3</sub>)alcohol, or an (C<sub>2</sub>-C<sub>3</sub>)ester.

24 (new). The composition of matter according to claim 23, wherein said carrier is an adjuvant.

25 (new). The composition of matter according to claim 24, wherein said composition of matter further comprises an antigen.

26 (new). The composition of matter according to claim 23, wherein said carrier is a pharmaceutically acceptable carrier.

27 (new). A method for preparing a diphosphoramidate monoester compound comprising:

- (a) reacting an alkylhalide R-X in a coupling step with a diethylphosphoramidate or diethylchlorophosphate reagent;
- (b) reacting the compound prepared in step (a) in a saponification step thereby removing O-ethyl groups; and
- (c) reacting the compound prepared in step (b) in a phosphorylation step thereby preparing a diphosphoramidate monoester,

wherein R is a linear, branched, or cyclic, aromatic or not, saturated or unsaturated, C1-C50 hydrocarbon group, optionally interrupted by at least one heteroatom, wherein said hydrocarbon group comprises an alkyl, an alkylenyl, or an alkynyl, preferably an alkyl or an alkylene, which can

be substituted by one or several substituents selected from the group consisting of: an alkyl, an alkylenyl, an alkynyl, an epoxyalkyl, an aryl, an heterocycle, an alkoxy, an acyl, an alcohol, a carboxylic group (-COOH), an ester, an amine, an amino group (-NH<sub>2</sub>), an amide (-CONH<sub>2</sub>), an imine, a nitrile, an hydroxyl (-OH), a aldehyde group (-CHO), an halogen, an halogenoalkyl, a thiol (-SH), a thioalkyl, a sulfone, a sulfoxide, and a combination thereof, and

wherein X is a moiety capable of being displaced by a diethylphosphoramidate group under suitable conditions.

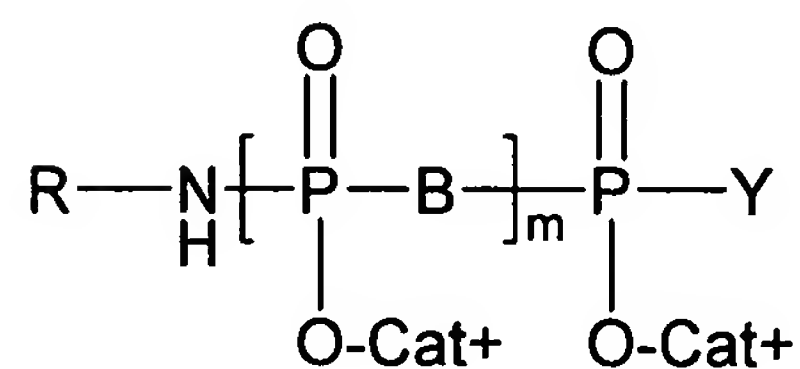
28 (new). The method according to claim 27, wherein X is an NH<sub>2</sub> group and said R-X compound is reacted in a coupling step with a diethylchlorophosphate compound.

29 (new). The method according to claim 27, wherein X is selected from the group consisting of I, Br and Cl.

30 (new). A method of preparing a (E)-2-(4-azido-2-methylbut-2-en yloxy)tetrahydro-2H-pyran compound, comprising providing a (E)-2-(4-Chloro-2-methylbut-2-en yloxy)tetrahydro-2H-pyran compound and reacting said compound with a sodium azide in a water-pentane biphasic mixture in the presence of phase transfer catalyst.

31 (new). A method of activation  $\gamma\delta$  T cell, the method comprising bringing a  $\gamma\delta$  T cell into contact with a composition comprising a  $\gamma\delta$  T cell activator selected from the group consisting of:

a)



Formula (I)

wherein Cat<sup>+</sup> represents one or several identical or different organic or mineral cation(s) including proton;

m is an integer from 1 to 3;

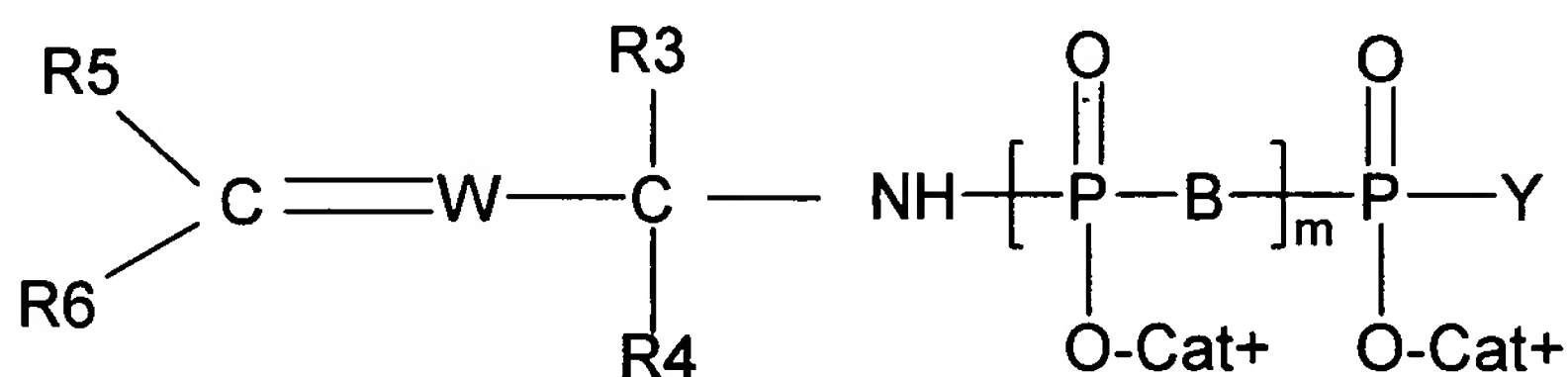
B is O, NH, or any group capable to be hydrolyzed;

Y = O<sup>-</sup>Cat<sup>+</sup>, a C<sub>1</sub>-C<sub>3</sub> alkyl group, a group -A-R, or a radical selected from the group consisting of a nucleoside, an oligonucleotide, a nucleic acid, an amino acid, a peptide, a protein, a monosaccharide, an oligosaccharide, a polysaccharide, a fatty acid, a simple lipid, a complex lipid, a folic acid, a tetrahydrofolic acid, a phosphoric acid, an inositol, a vitamin, a co-enzyme, a flavonoid, an aldehyde, an epoxyde and a halohydrin;

A is O, NH, CHF, CF<sub>2</sub> or CH<sub>2</sub>; and,

R is a linear, branched, or cyclic, aromatic or not, saturated or unsaturated, C<sub>1</sub>-C<sub>50</sub> hydrocarbon group, optionally interrupted by at least one heteroatom, wherein said hydrocarbon group comprises an alkyl, an alkylenyl, or an alkynyl, preferably an alkyl or an alkylene, which can be substituted by one or several substituents selected from the group consisting of : an alkyl, an alkylenyl, an alkynyl, an epoxyalkyl, an aryl, a heterocycle, an alkoxy, an acyl, an alcohol, a carboxylic group (-COOH), an ester, an amine, an amino group (-NH<sub>2</sub>), an amide (-CONH<sub>2</sub>), an imine, a nitrile, an hydroxyl (-OH), a aldehyde group (-CHO), an halogen, an halogenoalkyl, a thiol (-SH), a thioalkyl, a sulfone, a sulfoxide, and a combination thereof;

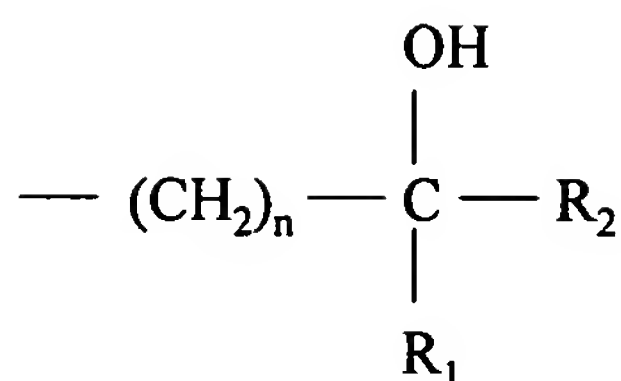
b)



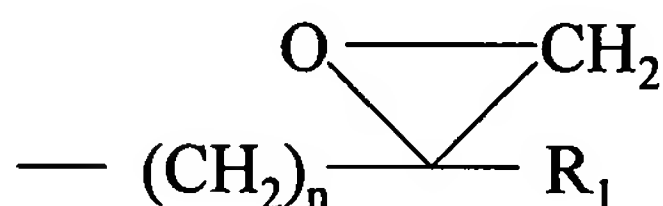
Formula (X)

in which R<sub>3</sub>, R<sub>4</sub>, and R<sub>5</sub>, identical or different, are a hydrogen or (C<sub>1</sub>-C<sub>3</sub>)alkyl group, W is -CH- or -N-, R<sub>6</sub> is an (C<sub>2</sub>-C<sub>3</sub>)acyl, an aldehyde, an (C<sub>1</sub>-C<sub>3</sub>)alcohol, or an (C<sub>2</sub>-C<sub>3</sub>)ester, Cat<sup>+</sup> represents one or several identical or different organic or mineral cation(s) including the proton, B is O or NH, m is an integer from 1 to 3, and Y is O<sup>-</sup>Cat<sup>+</sup>, a nucleoside, or a radical -A-R, wherein A is O, NH, CHF, CF<sub>2</sub> or CH<sub>2</sub>, and R is selected from the group consisting of:

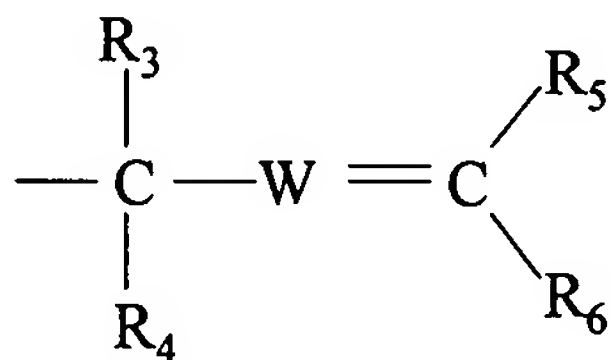




wherein n is an integer from 2 to 20, R<sub>1</sub> is a (C<sub>1</sub>-C<sub>3</sub>)alkyl group, and R<sub>2</sub> is an halogenated (C<sub>1</sub>-C<sub>3</sub>)alkyl, a (C<sub>1</sub>-C<sub>3</sub>)alkoxy-(C<sub>1</sub>-C<sub>3</sub>)alkyl, an halogenated (C<sub>2</sub>-C<sub>3</sub>)acyl or a (C<sub>1</sub>-C<sub>3</sub>)alkoxy-(C<sub>2</sub>-C<sub>3</sub>)acyl;

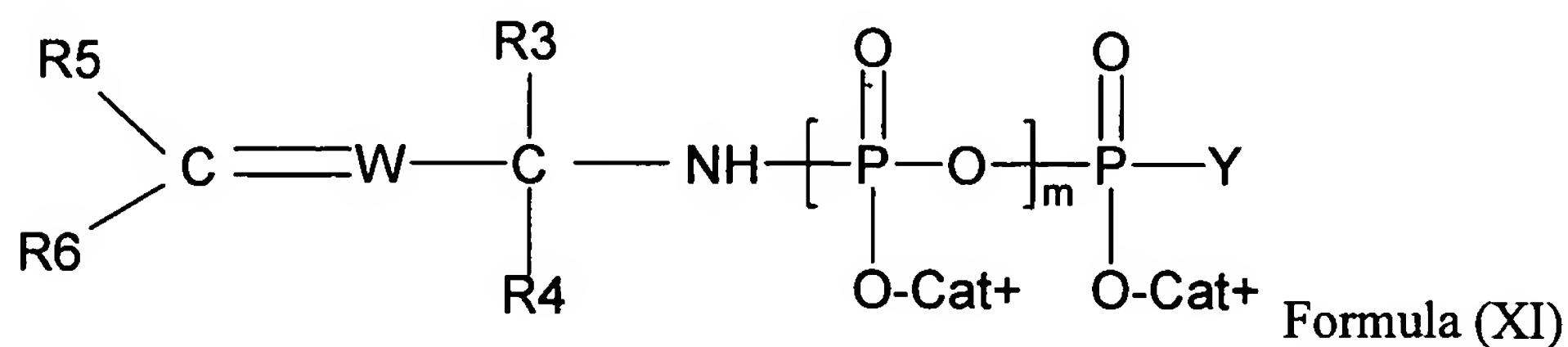


wherein n is an integer from 2 to 20, and R<sub>1</sub> is a methyl or ethyl group; and



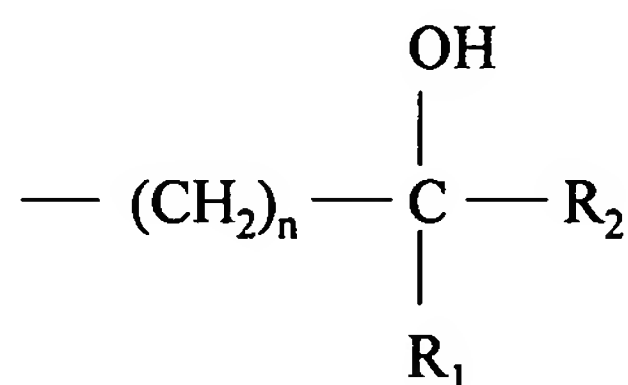
wherein R<sub>3</sub>, R<sub>4</sub>, and R<sub>5</sub>, identical or different, are a hydrogen or (C<sub>1</sub>-C<sub>3</sub>)alkyl group, W is -CH- or -N-, and R<sub>6</sub> is an (C<sub>2</sub>-C<sub>3</sub>)acyl, an aldehyde, an (C<sub>1</sub>-C<sub>3</sub>)alcohol, or an (C<sub>2</sub>-C<sub>3</sub>)ester;

c)

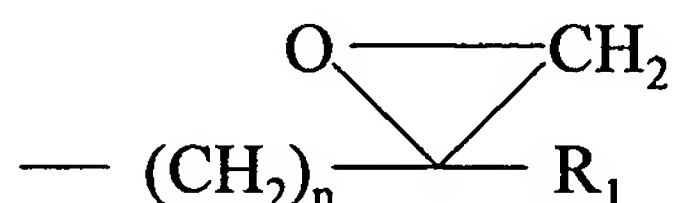


in which R<sub>3</sub>, R<sub>4</sub>, and R<sub>5</sub>, identical or different, are a hydrogen or (C<sub>1</sub>-C<sub>3</sub>)alkyl group, W is -CH- or -N-, R<sub>6</sub> is an (C<sub>2</sub>-C<sub>3</sub>)acyl, an aldehyde, an (C<sub>1</sub>-C<sub>3</sub>)alcohol, or an (C<sub>2</sub>-C<sub>3</sub>)ester, Cat<sup>+</sup> represents one or several identical or different organic or mineral cation(s) including the proton, m is an integer from 1

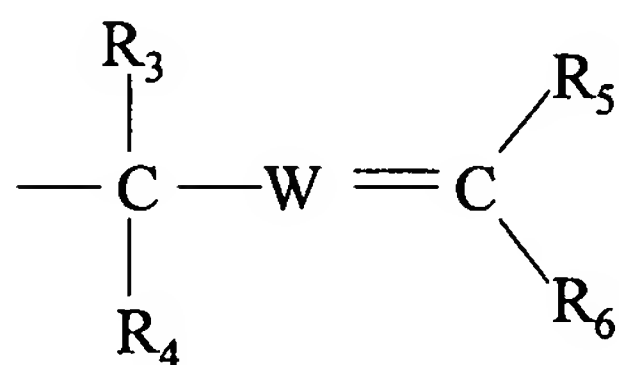
to 3, and Y is O<sup>-</sup>Cat<sup>+</sup>, a nucleoside, or a radical –A-R, wherein A is O, NH, CHF, CF<sub>2</sub> or CH<sub>2</sub>, and R is selected from the group consisting of:



wherein n is an integer from 2 to 20, R<sub>1</sub> is a (C<sub>1</sub>-C<sub>3</sub>)alkyl group, and R<sub>2</sub> is an halogenated (C<sub>1</sub>-C<sub>3</sub>)alkyl, a (C<sub>1</sub>-C<sub>3</sub>)alkoxy-(C<sub>1</sub>-C<sub>3</sub>)alkyl, an halogenated (C<sub>2</sub>-C<sub>3</sub>)acyl or a (C<sub>1</sub>-C<sub>3</sub>)alkoxy-(C<sub>2</sub>-C<sub>3</sub>)acyl;

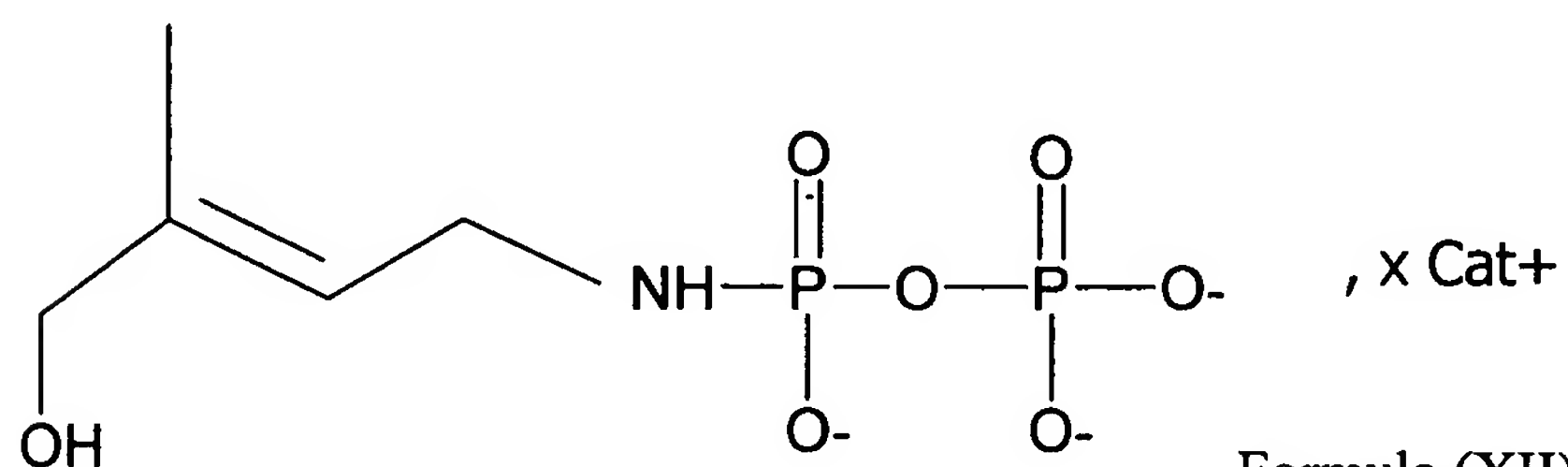


wherein n is an integer from 2 to 20, and R<sub>1</sub> is a methyl or ethyl group; and



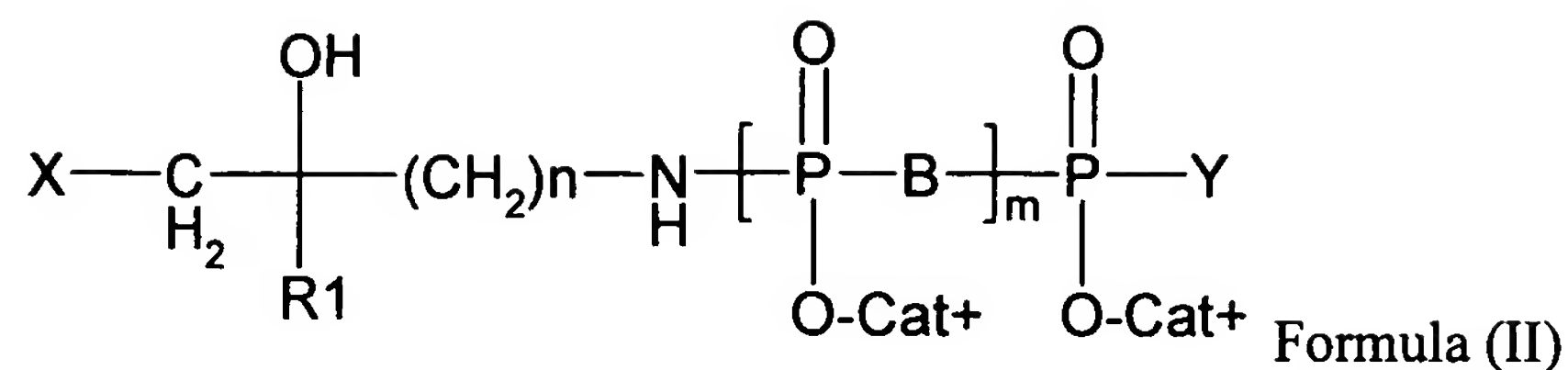
wherein R<sub>3</sub>, R<sub>4</sub>, and R<sub>5</sub>, identical or different, are a hydrogen or (C<sub>1</sub>-C<sub>3</sub>)alkyl group, W is –CH– or –N–, and R<sub>6</sub> is an (C<sub>2</sub>-C<sub>3</sub>)acyl, an aldehyde, an (C<sub>1</sub>-C<sub>3</sub>)alcohol, or an (C<sub>2</sub>-C<sub>3</sub>)ester;

d)

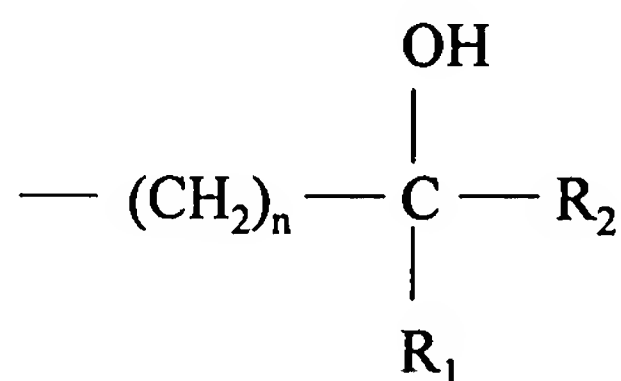


Formula (XII) N-HDMAPP;

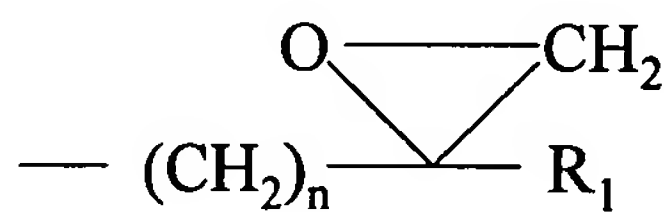
e)



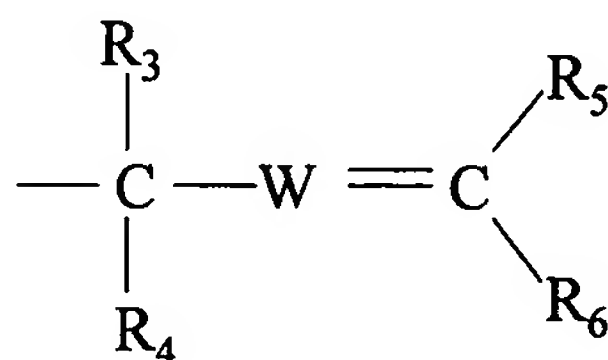
in which X is an halogen, B is O or NH, m is an integer from 1 to 3, R<sub>1</sub> is a methyl or ethyl group, Cat<sup>+</sup> represents one or several identical or different organic or mineral cation(s) including the proton, and n is an integer from 2 to 20, and Y is O<sup>-</sup>Cat<sup>+</sup>, a nucleoside, or a radical -A-R, wherein A is O, NH, CHF, CF<sub>2</sub> or CH<sub>2</sub> and R is selected from the group consisting of:



wherein n is an integer from 2 to 20, R<sub>1</sub> is a (C<sub>1</sub>-C<sub>3</sub>)alkyl group, and R<sub>2</sub> is an halogenated (C<sub>1</sub>-C<sub>3</sub>)alkyl, a (C<sub>1</sub>-C<sub>3</sub>)alkoxy-(C<sub>1</sub>-C<sub>3</sub>)alkyl, an halogenated (C<sub>2</sub>-C<sub>3</sub>)acyl or a (C<sub>1</sub>-C<sub>3</sub>)alkoxy-(C<sub>2</sub>-C<sub>3</sub>)acyl;

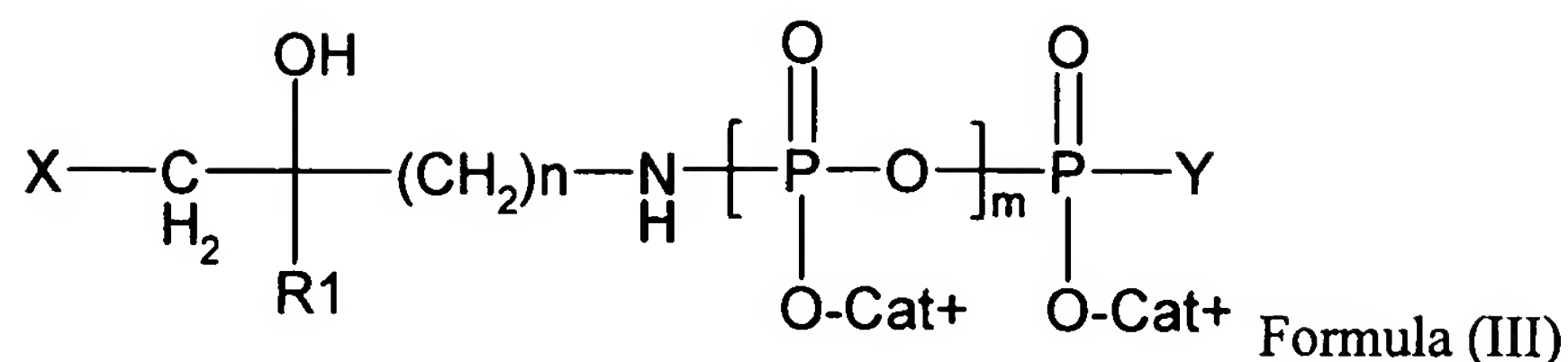


wherein n is an integer from 2 to 20, and R<sub>1</sub> is a methyl or ethyl group; and

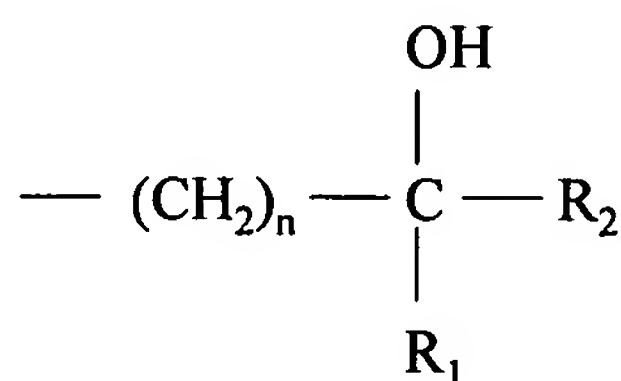


wherein R<sub>3</sub>, R<sub>4</sub>, and R<sub>5</sub>, identical or different, are a hydrogen or (C<sub>1</sub>-C<sub>3</sub>)alkyl group, W is -CH- or -N-, and R<sub>6</sub> is an (C<sub>2</sub>-C<sub>3</sub>)acyl, an aldehyde, an (C<sub>1</sub>-C<sub>3</sub>)alcohol, or an (C<sub>2</sub>-C<sub>3</sub>)ester;

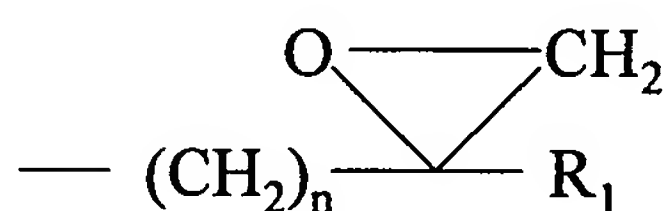
f)



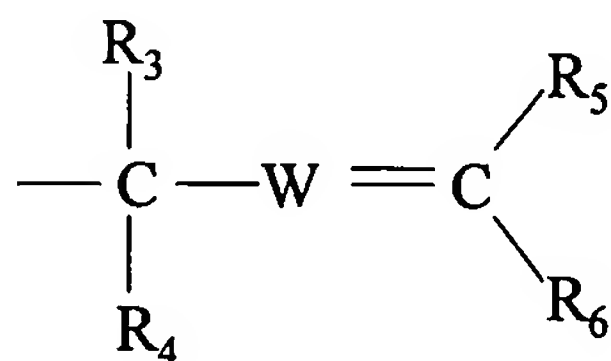
in which X is an halogen, B is O or NH, m is an integer from 1 to 3, R<sub>1</sub> is a methyl or ethyl group, Cat<sup>+</sup> represents one or several identical or different organic or mineral cation(s) including the proton, and n is an integer from 2 to 20, and Y is O<sup>-</sup>Cat<sup>+</sup>, a nucleoside, or a radical -A-R, wherein A is O, NH, CHF, CF<sub>2</sub> or CH<sub>2</sub> and R is selected from the group consisting of:



wherein n is an integer from 2 to 20, R<sub>1</sub> is a (C<sub>1</sub>-C<sub>3</sub>)alkyl group, and R<sub>2</sub> is an halogenated (C<sub>1</sub>-C<sub>3</sub>)alkyl, a (C<sub>1</sub>-C<sub>3</sub>)alkoxy-(C<sub>1</sub>-C<sub>3</sub>)alkyl, an halogenated (C<sub>2</sub>-C<sub>3</sub>)acyl or a (C<sub>1</sub>-C<sub>3</sub>)alkoxy-(C<sub>2</sub>-C<sub>3</sub>)acyl;

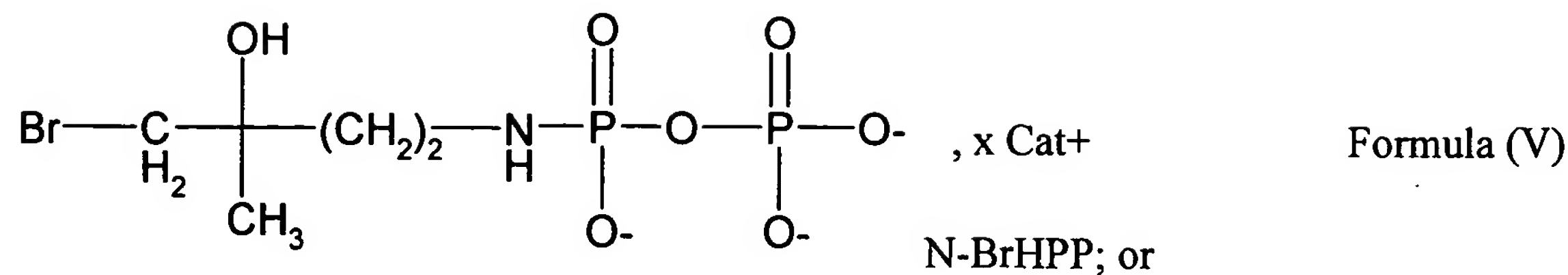


wherein n is an integer from 2 to 20, and R<sub>1</sub> is a methyl or ethyl group; and

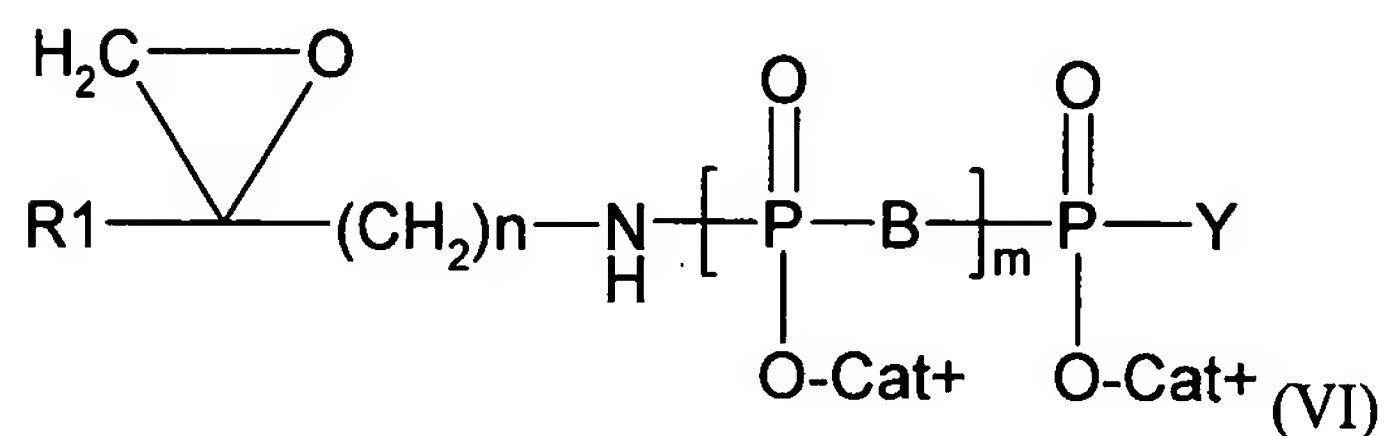


wherein R<sub>3</sub>, R<sub>4</sub>, and R<sub>5</sub>, identical or different, are a hydrogen or (C<sub>1</sub>-C<sub>3</sub>)alkyl group, W is -CH- or -N-, and R<sub>6</sub> is an (C<sub>2</sub>-C<sub>3</sub>)acyl, an aldehyde, an (C<sub>1</sub>-C<sub>3</sub>)alcohol, or an (C<sub>2</sub>-C<sub>3</sub>)ester;

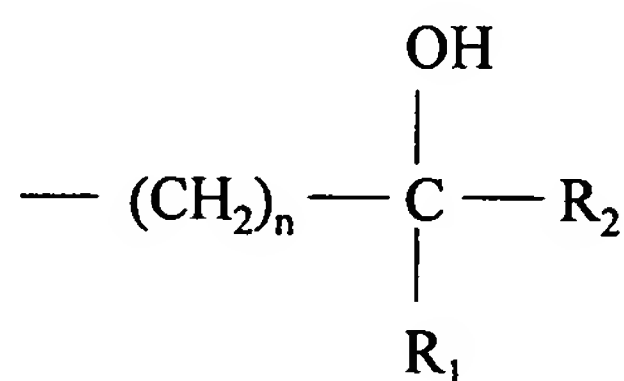
g)



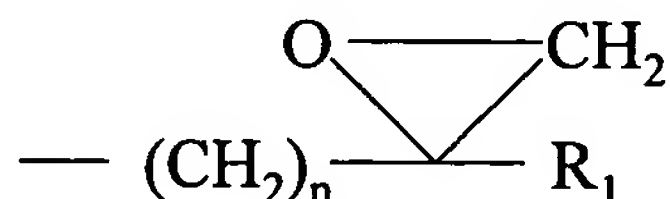
h)



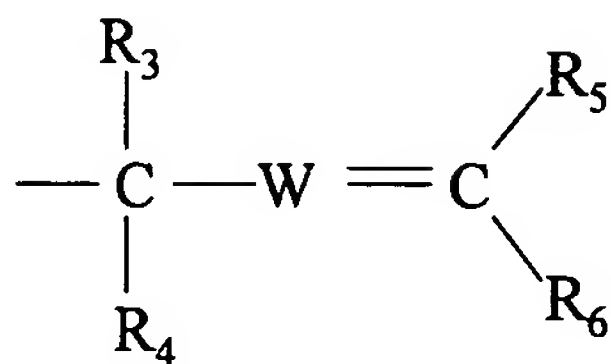
in which R1 is a methyl or ethyl group, Cat<sup>+</sup> represents one or several identical or different organic or mineral cation(s), including the proton, B is O or NH, m is an integer from 1 to 3, and n is an integer from 2 to 20, and Y is O<sup>-</sup>Cat<sup>+</sup>, a nucleoside, or a radical -A-R, wherein A is O, NH, CHF, CF<sub>2</sub> or CH<sub>2</sub>, and R is selected from the group consisting of:



wherein n is an integer from 2 to 20, R<sub>1</sub> is a (C<sub>1</sub>-C<sub>3</sub>)alkyl group, and R<sub>2</sub> is an halogenated (C<sub>1</sub>-C<sub>3</sub>)alkyl, a (C<sub>1</sub>-C<sub>3</sub>)alkoxy-(C<sub>1</sub>-C<sub>3</sub>)alkyl, an halogenated (C<sub>2</sub>-C<sub>3</sub>)acyl or a (C<sub>1</sub>-C<sub>3</sub>)alkoxy-(C<sub>2</sub>-C<sub>3</sub>)acyl;



wherein n is an integer from 2 to 20, and R<sub>1</sub> is a methyl or ethyl group; and

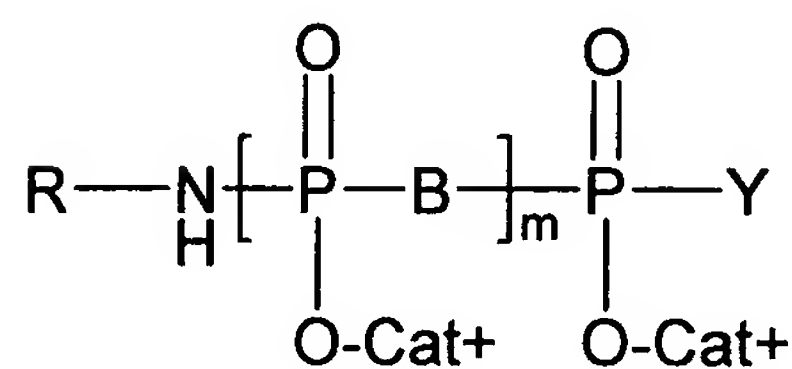


wherein R<sub>3</sub>, R<sub>4</sub>, and R<sub>5</sub>, identical or different, are a hydrogen or (C<sub>1</sub>-C<sub>3</sub>)alkyl group, W is -CH- or -N-, and R<sub>6</sub> is an (C<sub>2</sub>-C<sub>3</sub>)acyl, an aldehyde, an (C<sub>1</sub>-C<sub>3</sub>)alcohol, or an (C<sub>2</sub>-C<sub>3</sub>)ester.

32 (new). The method according to claim 31 wherein the  $\gamma\delta$  T cell is brought into contact with said  $\gamma\delta$  T cell activator in vitro.

33 (new). A method of immunotherapy or stimulation of an immune response comprising the administration of a composition comprising a  $\gamma\delta$  T cell activator selected from the group consisting of:

a)



Formula (I)

wherein Cat<sup>+</sup> represents one or several identical or different organic or mineral cation(s) including proton;

m is an integer from 1 to 3;

B is O, NH, or any group capable to be hydrolyzed;

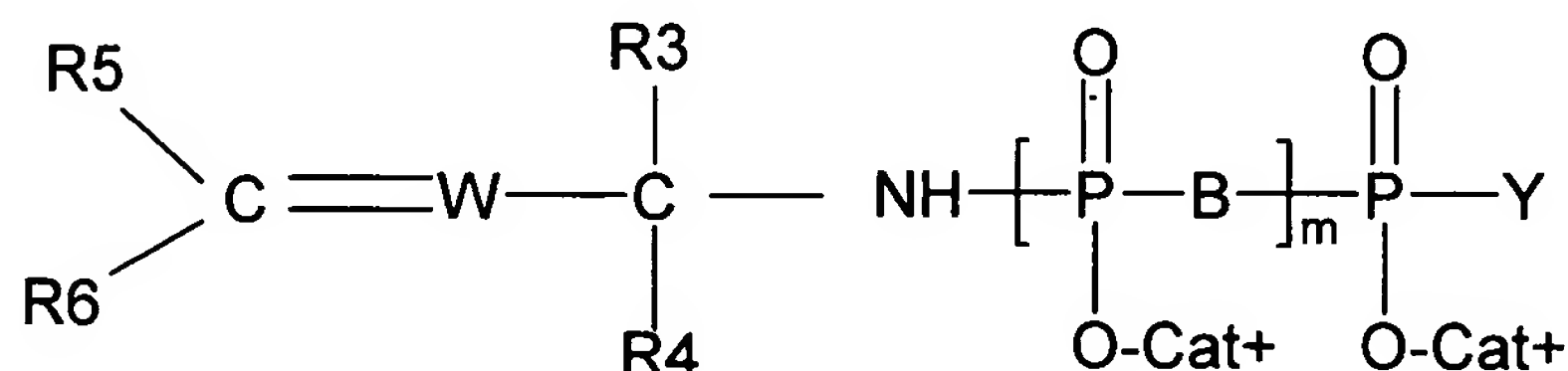
Y = O<sup>-</sup>Cat<sup>+</sup>, a C<sub>1</sub>-C<sub>3</sub> alkyl group, a group -A-R, or a radical selected from the group consisting of a nucleoside, an oligonucleotide, a nucleic acid, an amino acid, a peptide, a protein, a monosaccharide, an oligosaccharide, a polysaccharide, a fatty acid, a simple lipid, a complex lipid, a

folic acid, a tetrahydrofolic acid, a phosphoric acid, an inositol, a vitamin, a co-enzyme, a flavonoid, an aldehyde, an epoxyde and a halohydrin;

A is O, NH, CHF, CF<sub>2</sub> or CH<sub>2</sub>; and,

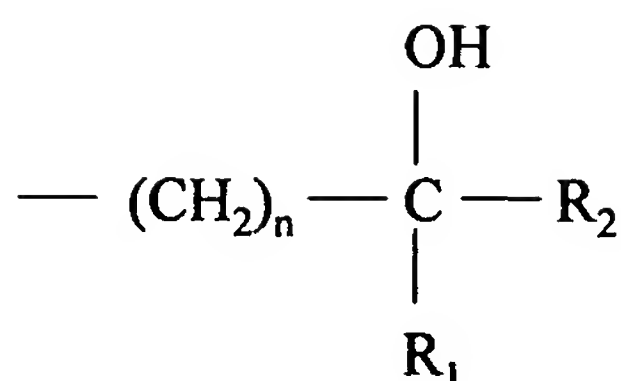
R is a linear, branched, or cyclic, aromatic or not, saturated or unsaturated, C<sub>1</sub>-C<sub>50</sub> hydrocarbon group, optionally interrupted by at least one heteroatom, wherein said hydrocarbon group comprises an alkyl, an alkylenyl, or an alkynyl, preferably an alkyl or an alkylene, which can be substituted by one or several substituents selected from the group consisting of : an alkyl, an alkylenyl, an alkynyl, an epoxyalkyl, an aryl, an heterocycle, an alkoxy, an acyl, an alcohol, a carboxylic group (-COOH), an ester, an amine, an amino group (-NH<sub>2</sub>), an amide (-CONH<sub>2</sub>), an imine, a nitrile, an hydroxyl (-OH), a aldehyde group (-CHO), an halogen, an halogenoalkyl, a thiol (-SH), a thioalkyl, a sulfone, a sulfoxide, and a combination thereof;

b)

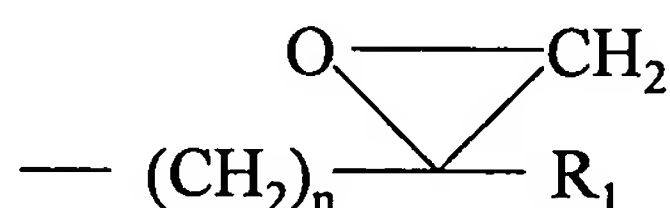


Formula (X)

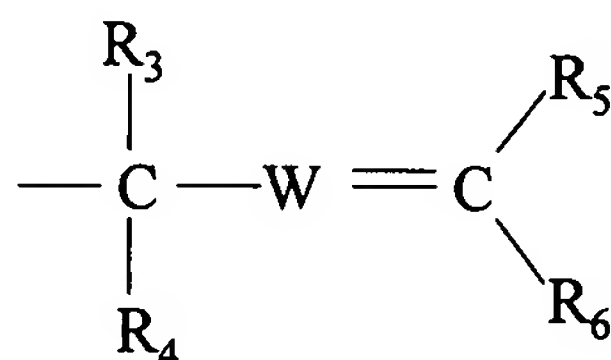
in which R<sub>3</sub>, R<sub>4</sub>, and R<sub>5</sub>, identical or different, are a hydrogen or (C<sub>1</sub>-C<sub>3</sub>)alkyl group, W is -CH- or -N-, R<sub>6</sub> is an (C<sub>2</sub>-C<sub>3</sub>)acyl, an aldehyde, an (C<sub>1</sub>-C<sub>3</sub>)alcohol, or an (C<sub>2</sub>-C<sub>3</sub>)ester, Cat<sup>+</sup> represents one or several identical or different organic or mineral cation(s) including the proton, B is O or NH, m is an integer from 1 to 3, and Y is O<sup>-</sup>Cat<sup>+</sup>, a nucleoside, or a radical -A-R, wherein A is O, NH, CHF, CF<sub>2</sub> or CH<sub>2</sub>, and R is selected from the group consisting of:



wherein n is an integer from 2 to 20, R<sub>1</sub> is a (C<sub>1</sub>-C<sub>3</sub>)alkyl group, and R<sub>2</sub> is an halogenated (C<sub>1</sub>-C<sub>3</sub>)alkyl, a (C<sub>1</sub>-C<sub>3</sub>)alkoxy-(C<sub>1</sub>-C<sub>3</sub>)alkyl, an halogenated (C<sub>2</sub>-C<sub>3</sub>)acyl or a (C<sub>1</sub>-C<sub>3</sub>)alkoxy-(C<sub>2</sub>-C<sub>3</sub>)acyl;

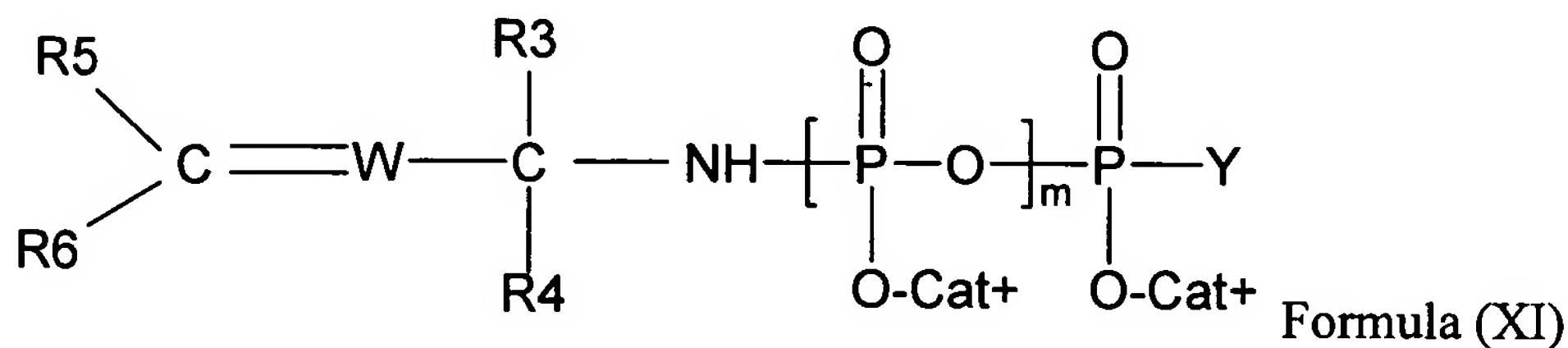


wherein n is an integer from 2 to 20, and R<sub>1</sub> is a methyl or ethyl group; and



wherein R<sub>3</sub>, R<sub>4</sub>, and R<sub>5</sub>, identical or different, are a hydrogen or (C<sub>1</sub>-C<sub>3</sub>)alkyl group, W is -CH- or -N-, and R<sub>6</sub> is an (C<sub>2</sub>-C<sub>3</sub>)acyl, an aldehyde, an (C<sub>1</sub>-C<sub>3</sub>)alcohol, or an (C<sub>2</sub>-C<sub>3</sub>)ester;

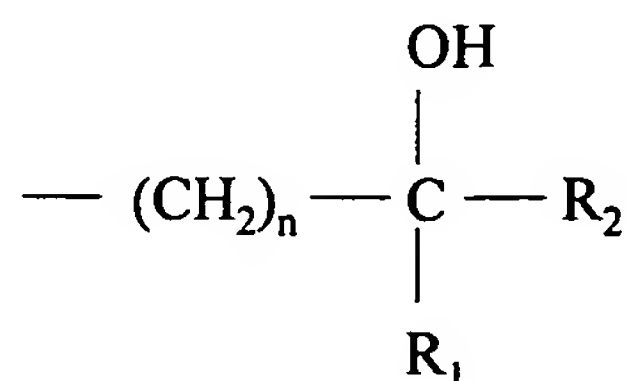
c)



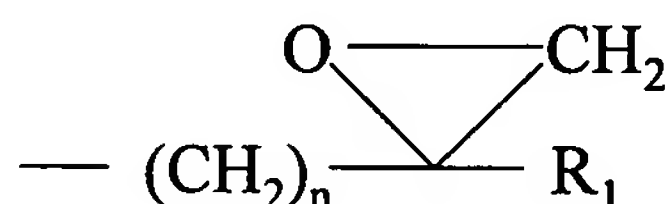
in which R<sub>3</sub>, R<sub>4</sub>, and R<sub>5</sub>, identical or different, are a hydrogen or (C<sub>1</sub>-C<sub>3</sub>)alkyl group, W is -CH- or -N-, R<sub>6</sub> is an (C<sub>2</sub>-C<sub>3</sub>)acyl, an aldehyde, an (C<sub>1</sub>-C<sub>3</sub>)alcohol, or an (C<sub>2</sub>-C<sub>3</sub>)ester, Cat<sup>+</sup> represents one or several identical or different organic or mineral cation(s) including the proton, m is an integer from 1



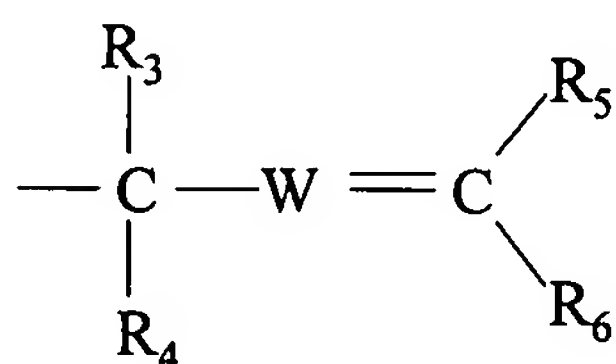
to 3, and Y is O<sup>-</sup>Cat<sup>+</sup>, a nucleoside, or a radical –A-R, wherein A is O, NH, CHF, CF<sub>2</sub> or CH<sub>2</sub>, and R is selected from the group consisting of:



wherein n is an integer from 2 to 20, R<sub>1</sub> is a (C<sub>1</sub>-C<sub>3</sub>)alkyl group, and R<sub>2</sub> is an halogenated (C<sub>1</sub>-C<sub>3</sub>)alkyl, a (C<sub>1</sub>-C<sub>3</sub>)alkoxy-(C<sub>1</sub>-C<sub>3</sub>)alkyl, an halogenated (C<sub>2</sub>-C<sub>3</sub>)acyl or a (C<sub>1</sub>-C<sub>3</sub>)alkoxy-(C<sub>2</sub>-C<sub>3</sub>)acyl;

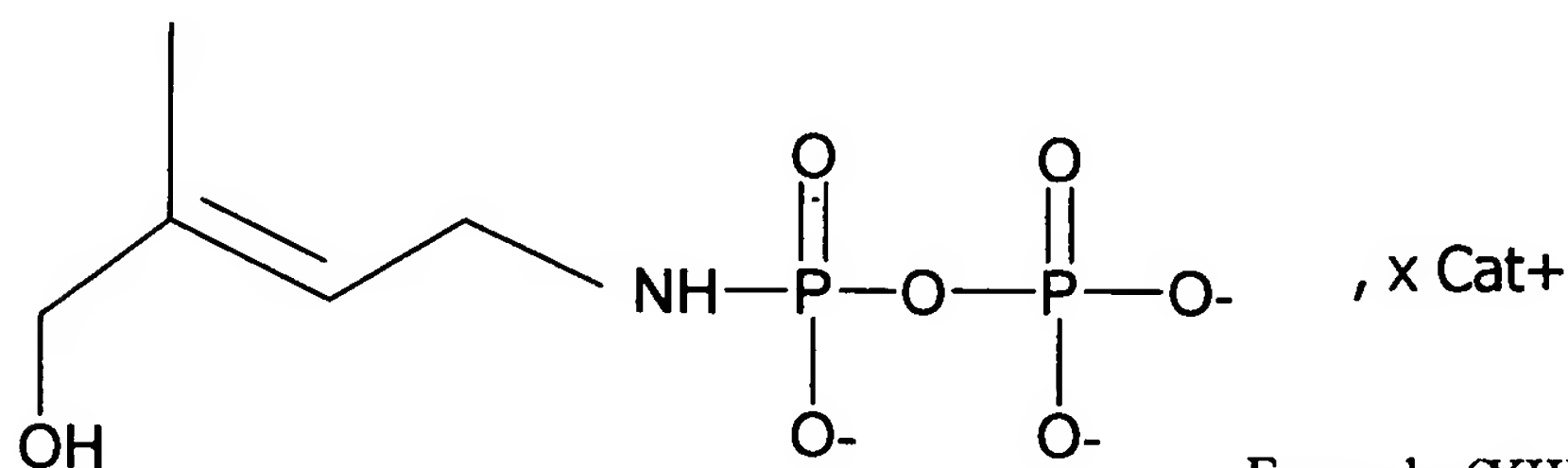


wherein n is an integer from 2 to 20, and R<sub>1</sub> is a methyl or ethyl group; and



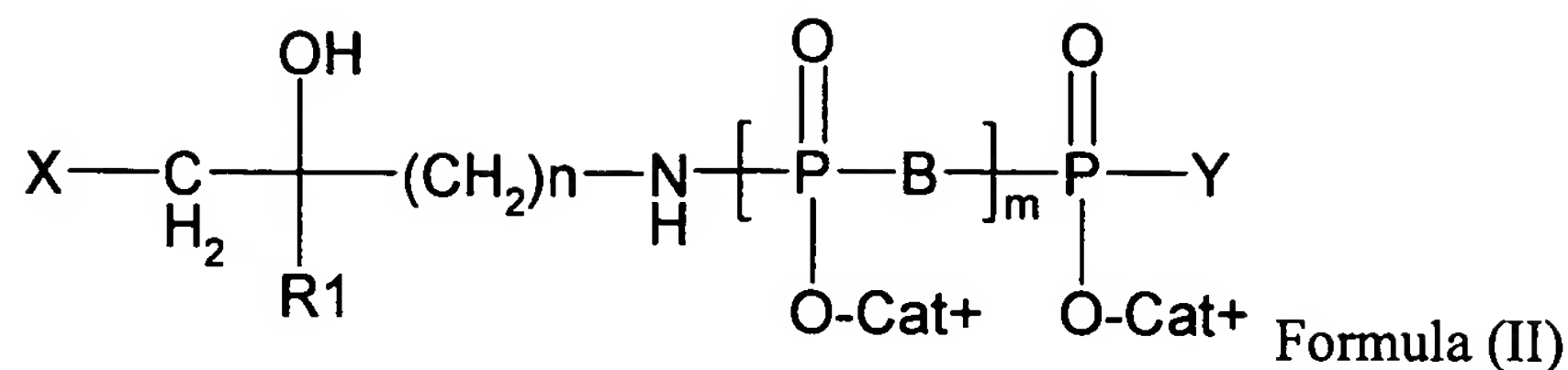
wherein R<sub>3</sub>, R<sub>4</sub>, and R<sub>5</sub>, identical or different, are a hydrogen or (C<sub>1</sub>-C<sub>3</sub>)alkyl group, W is –CH– or –N–, and R<sub>6</sub> is an (C<sub>2</sub>-C<sub>3</sub>)acyl, an aldehyde, an (C<sub>1</sub>-C<sub>3</sub>)alcohol, or an (C<sub>2</sub>-C<sub>3</sub>)ester;

d)

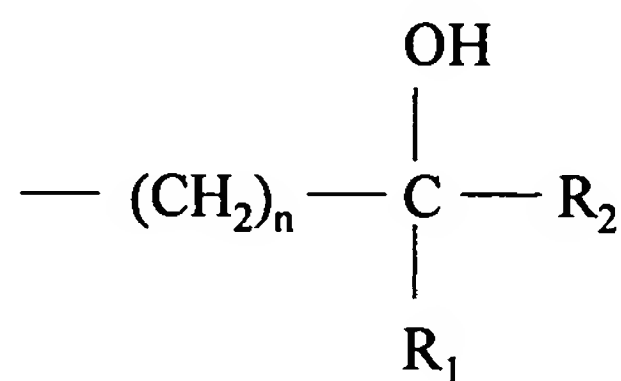


Formula (XII) N-HDMAPP;

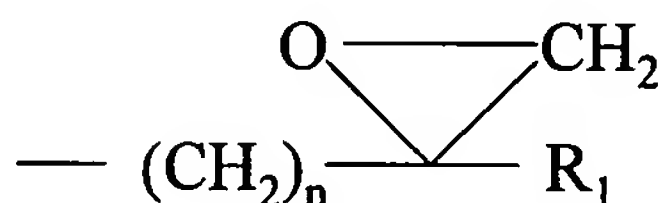
e)



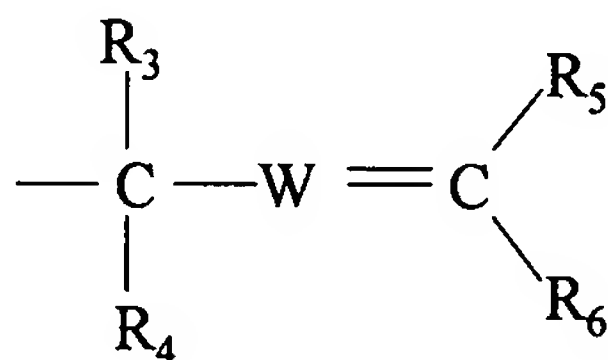
in which X is an halogen, B is O or NH, m is an integer from 1 to 3, R<sub>1</sub> is a methyl or ethyl group, Cat<sup>+</sup> represents one or several identical or different organic or mineral cation(s) including the proton, and n is an integer from 2 to 20, and Y is O<sup>-</sup>Cat<sup>+</sup>, a nucleoside, or a radical -A-R, wherein A is O, NH, CHF, CF<sub>2</sub> or CH<sub>2</sub> and R is selected from the group consisting of:



wherein n is an integer from 2 to 20, R<sub>1</sub> is a (C<sub>1</sub>-C<sub>3</sub>)alkyl group, and R<sub>2</sub> is an halogenated (C<sub>1</sub>-C<sub>3</sub>)alkyl, a (C<sub>1</sub>-C<sub>3</sub>)alkoxy-(C<sub>1</sub>-C<sub>3</sub>)alkyl, an halogenated (C<sub>2</sub>-C<sub>3</sub>)acyl or a (C<sub>1</sub>-C<sub>3</sub>)alkoxy-(C<sub>2</sub>-C<sub>3</sub>)acyl;

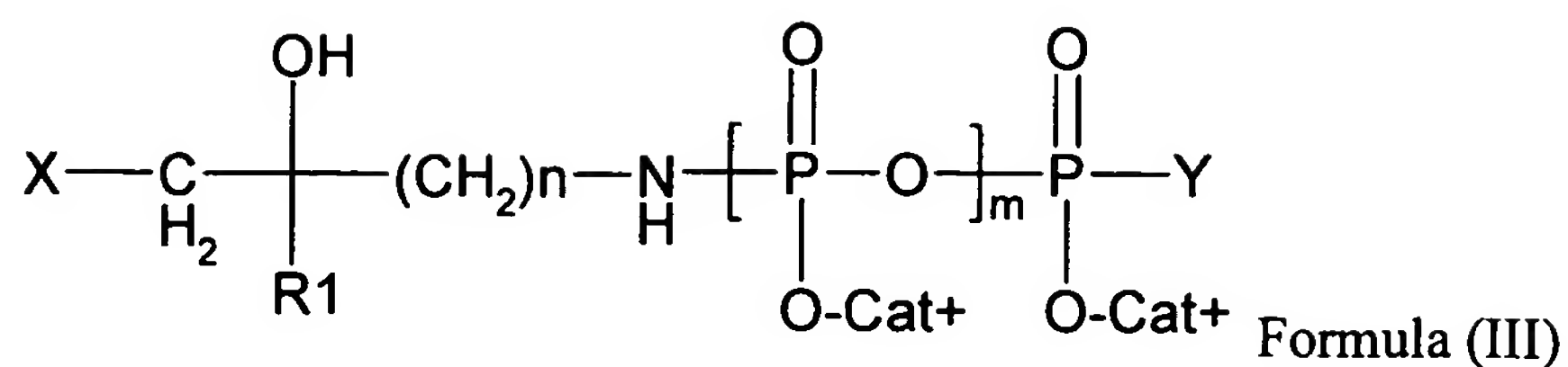


wherein n is an integer from 2 to 20, and R<sub>1</sub> is a methyl or ethyl group; and

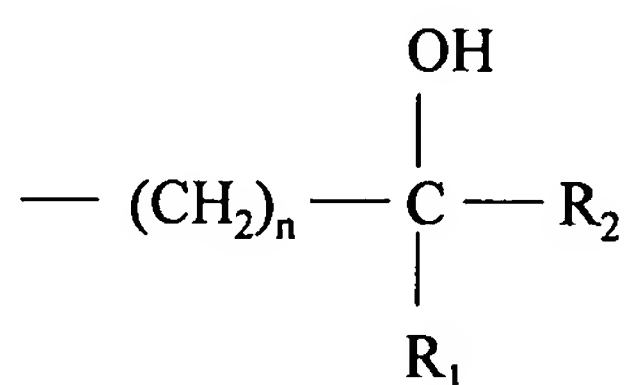


wherein R<sub>3</sub>, R<sub>4</sub>, and R<sub>5</sub>, identical or different, are a hydrogen or (C<sub>1</sub>-C<sub>3</sub>)alkyl group, W is -CH- or -N-, and R<sub>6</sub> is an (C<sub>2</sub>-C<sub>3</sub>)acyl, an aldehyde, an (C<sub>1</sub>-C<sub>3</sub>)alcohol, or an (C<sub>2</sub>-C<sub>3</sub>)ester;

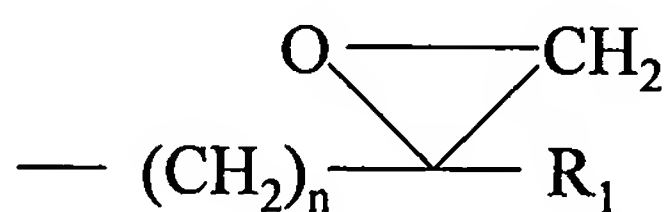
f)



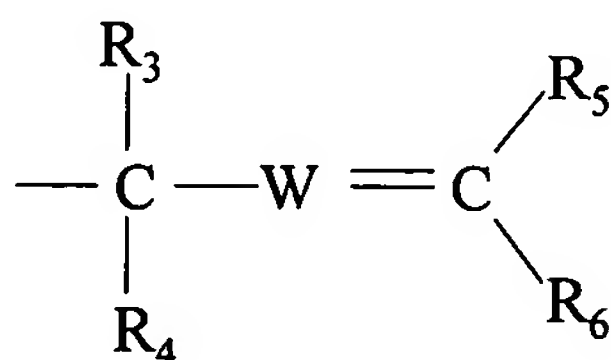
in which X is an halogen, B is O or NH, m is an integer from 1 to 3, R<sub>1</sub> is a methyl or ethyl group, Cat<sup>+</sup> represents one or several identical or different organic or mineral cation(s) including the proton, and n is an integer from 2 to 20, and Y is O<sup>-</sup>Cat<sup>+</sup>, a nucleoside, or a radical -A-R, wherein A is O, NH, CHF, CF<sub>2</sub> or CH<sub>2</sub> and R is selected from the group consisting of:



wherein n is an integer from 2 to 20, R<sub>1</sub> is a (C<sub>1</sub>-C<sub>3</sub>)alkyl group, and R<sub>2</sub> is an halogenated (C<sub>1</sub>-C<sub>3</sub>)alkyl, a (C<sub>1</sub>-C<sub>3</sub>)alkoxy-(C<sub>1</sub>-C<sub>3</sub>)alkyl, an halogenated (C<sub>2</sub>-C<sub>3</sub>)acyl or a (C<sub>1</sub>-C<sub>3</sub>)alkoxy-(C<sub>2</sub>-C<sub>3</sub>)acyl;

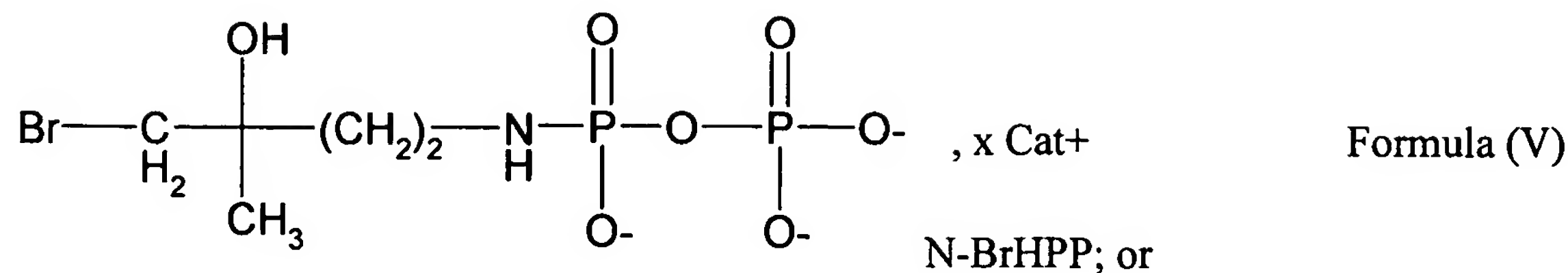


wherein n is an integer from 2 to 20, and R<sub>1</sub> is a methyl or ethyl group; and

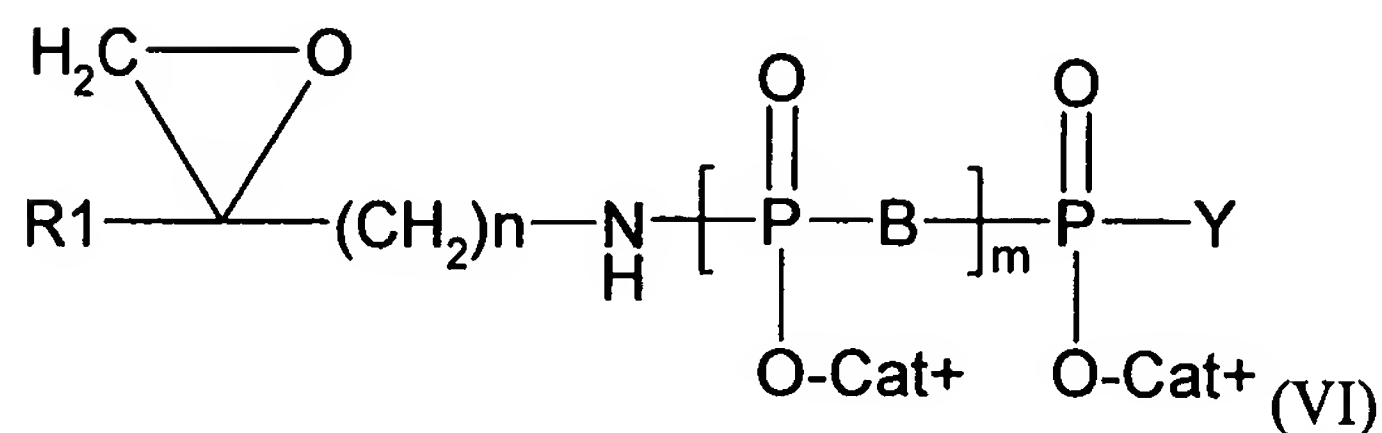


wherein R<sub>3</sub>, R<sub>4</sub>, and R<sub>5</sub>, identical or different, are a hydrogen or (C<sub>1</sub>-C<sub>3</sub>)alkyl group, W is -CH- or -N-, and R<sub>6</sub> is an (C<sub>2</sub>-C<sub>3</sub>)acyl, an aldehyde, an (C<sub>1</sub>-C<sub>3</sub>)alcohol, or an (C<sub>2</sub>-C<sub>3</sub>)ester;

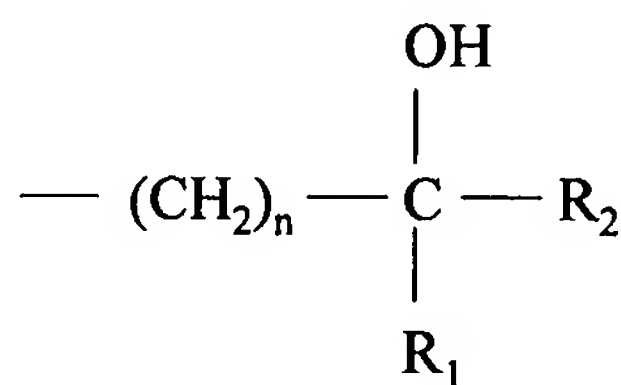
g)



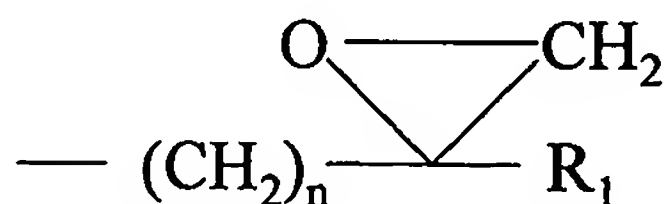
h)



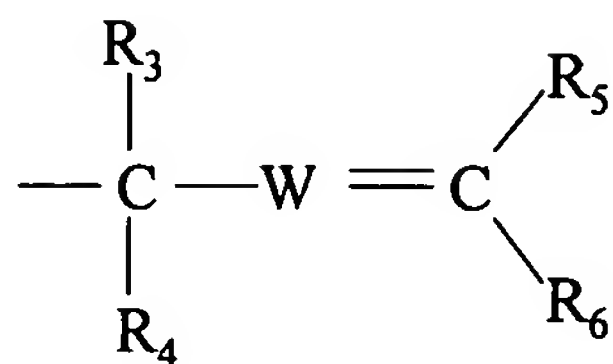
in which R1 is a methyl or ethyl group, Cat<sup>+</sup> represents one or several identical or different organic or mineral cation(s), including the proton, B is O or NH, m is an integer from 1 to 3, and n is an integer from 2 to 20, and Y is O<sup>-</sup>Cat<sup>+</sup>, a nucleoside, or a radical -A-R, wherein A is O, NH, CHF, CF<sub>2</sub> or CH<sub>2</sub>, and R is selected from the group consisting of:



wherein n is an integer from 2 to 20, R<sub>1</sub> is a (C<sub>1</sub>-C<sub>3</sub>)alkyl group, and R<sub>2</sub> is an halogenated (C<sub>1</sub>-C<sub>3</sub>)alkyl, a (C<sub>1</sub>-C<sub>3</sub>)alkoxy-(C<sub>1</sub>-C<sub>3</sub>)alkyl, an halogenated (C<sub>2</sub>-C<sub>3</sub>)acyl or a (C<sub>1</sub>-C<sub>3</sub>)alkoxy-(C<sub>2</sub>-C<sub>3</sub>)acyl;



wherein n is an integer from 2 to 20, and R<sub>1</sub> is a methyl or ethyl group; and



wherein R<sub>3</sub>, R<sub>4</sub>, and R<sub>5</sub>, identical or different, are a hydrogen or (C<sub>1</sub>-C<sub>3</sub>)alkyl group, W is –CH- or –N-, and R<sub>6</sub> is an (C<sub>2</sub>-C<sub>3</sub>)acyl, an aldehyde, an (C<sub>1</sub>-C<sub>3</sub>)alcohol, or an (C<sub>2</sub>-C<sub>3</sub>)ester to a subject.

34 (new). The method according to claim 33, wherein said subject is suffering from a tumor, solid tumor, an infectious disease, or an autoimmune disease or an allergic disease or said subject requires the stimulation of an immune response.

35 (new). The method according to claim 33, wherein said composition further comprises an antigen.